ESSAYS

ON THE

ANATOMY AND PHILOSOPHY

OF

EXPRESSION.

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TO

GEORGE JOSEPH BELL, Esq.

ADVOCATE,

PROFESSOR OF THE LAW OF SCOTLAND

IN THE UNIVERSITY OF EDINBURGH.

The reprinting of this volume recalls the time when it was written, when we studied together, before the serious pursuits of life were begun. I inscribe it to you, as the just object of my pride as well as of my affection; and that those most naturally interested in us may know how we have been united, so that from the age when they begin to wonder at the strange faces in their uncle's book, they may learn how much brotherly attachment adds to the value of life.

CHARLES BELL.

Soho-Square, Oct. 1, 1823.

PREFACE.

ANATOMY stands related to the arts of design, as the grammar of that language in which they address us. The expressions, attitudes, and movements of the human figure, are the characters of this language; which is adapted to convey the effect of historical narration, as well as to show the working of human passion, and give the most striking and lively indications of intellectual power and energy. The art of the painter, considered with a view to these interesting representations, assumes a high character. All the lesser embellishments and minuteness of representation are, by an artist who has those more enlarged views of his profession, regarded as foreign to the main subject: distracting and hurtful to the grand effect, admired only because they have

the merit of being accurate imitations, and almost appear to be what they are not. This distinction must be felt, or we shall never see the grand style in painting revived. The painter must not be satisfied to copy and represent what he sees; he must cultivate this talent of imitation, merely as bestowing those facilities which are to give scope to the exertions of his genius, as the instruments and means only which he is to employ for communicating his thoughts, and presenting to others the creations of his fancy. It is by his creative powers alone that he can become truly a painter; and for these he is to trust to original genius, cultivated and enriched by a constant observation of nature. Till he has acquired a poet's eye for nature, and can seize with intuitive quickness the appearances of passion, and all the effects produced upon the body by the operations of the mind, he has not raised himself above the mechanism of his art, nor does he rank with the poet or the historian.

To assist the painter in a department of this inspiring study, is one of the Author's objects in these

Essays. He has been desirous, in principles deduced from the structure of man, and the comparative anatomy of animals, to lay a foundation for studying the influence of the mind upon the body; and he ventures to expect great indulgence to an attempt at once so new and so difficult, where there is no authority to consult but that of nature.

After the first edition was published, I was so fortunate as to make discoveries in the Nervous System, which gave a new and extraordinary interest to the subject of these essays. I found that there was a system of nerves, distinguishable by structure and endowments, which had hitherto been confounded with the common nerves; and having traced them through the face, and neck, and body, and compared them in the different classes of animals, it was finally discovered that these nerves were the sole agents in expression, when the frame was wrought under the influence of passion.

Here was secure ground on which to proceed; before this, but vague surmises could be entertained of the nature of expression, since the organs had not been ascertained, or only partially. We witnessed emotions, we felt the sympathies implanted in our nature, nevertheless the description of passion was a mere description; poetical it might be, but never philosophical, since it was not known by what links the organs were excited, nor by what course the influence of the mind was propagated to the muscular frame. We might study to be accurate and minute, but something was wanting, and the inquirer was thrown back dissatisfied.

In proof of this I take the following extract from Dr. Beattie*.

"Descartes, and some other philosophers, have endeavoured to explain the physical cause which connects a human passion with its correspondent natural sign. They wanted to show, from the principles of

* Dissertations, Moral and Critical, 4to. p. 242.

motion, and of the animal economy, why fear, for example, produces trembling and paleness; why laughter attends the perception of incongruity; why anger inflames the blood, contracts the brows, and distends the nostrils; why shame is accompanied with blushing; why despair fixes the teeth together, distorts the joints, and disfigures the features; why scorn shoots out the lip; why sorrow overflows at the eyes; why envy and jealousy look askance; and why admiration raises the eyebrows and opens the mouth. Such inquiries may give rise to ingenious observation, but are not in other respects useful, because never attended with success. He who established the union of soul and body knows how and by what intermediate instruments the one operates upon the other. But to man this is a mystery unsearchable. We can only say that tears accompany sorrow, and the other natural signs their respective passions and sentiments, because such is the will of our Creator, and the law of the human constitution."

Yes, if that *will* be declared, we must abide by it and search no further. But, on the other hand, something informs me that it is acceptable to exercise the talents bestowed upon us, and to search and explain the Creator's works. This divine and philosopher says well, if we are to look on the surface only. But where is his authority for going no deeper? No doubt he believed that he was giving a very accurate statement of the effects of passion, but it would be easy to show that he has jumbled signs, quite incongruous, from an ignorance of their natural relations. We have in this extract an enumeration of phenomena the most surprising in the whole extent of nature, and the most affecting to human sympathies. We must confess that they are so deeply implanted in our nature, that we shall not be able to discover the ultimate connexion between the emotions of the soul and those signs of the body. But this conviction should not extinguish the desire of comprehending the organs of expression, more than those of the voice, or of seeing and hearing.

In these Essays the subject matter does not always correspond with the titles, so although there be something said of the forms of beauty, and the expression in painting, the work has a larger scope, and aims at greater usefulness. It has been the author's main design to furnish a sufficient foundation for arranging the symptoms of disease, and for a more accurate description of them.

The description of a disease is a mere catalogue of signs, if their cause and relation be not understood; and if no cause for certain appearances, and no relation among them be observed, the signs can neither be accurately recorded nor remembered.

The motion of one part of the body, produced by the excitement of another, and the movements produced by passion on the frame of the body, become *symptoms* when caused by disease.

A man pulling on a rope draws his breath and

retains it, to give force to his arms. Instinct produces the same effect in fear, for the moment of alarm is marked by a sudden inspiration, and a state of preparation for action. This, the painter requires to know before he can give an accurate representation of these conditions of the frame. But it is even more important to the physician. In the asthmatic, for example, the chest is kept distended, and the whole attitude is that best calculated to aid the actions of the muscles of respiration; and so that attitude and these actions become *symptomatic* of the disease.

And can there be a better lesson whereby symptoms are to be learned, than in the observation of the natural sympathies and appearances presented when the frame is wrought upon by the sentiments of the mind? An uninformed person walks through the wards of an hospital with a sensation varying only in intensity, but the physician sees a thousand features of disease to which he is blind, and suffers hopes and fears to which he is a stranger. The phy-

sician sees but a part, yet that partial view is attended with a train of consequences which none can perceive but those who are acquainted with the secret ties which bind the parts together.

It is the observation of these ties, these cords of sympathy which unite the body in its natural and healthful motions, in its agency under passion, and when suffering from disease, which the author proposes to be the chief subject of the following Essays. No one will deny that the signs in the eye must be noticed with more interest, and consequently with more minuteness, in proportion as the classification of its muscles and the sources of its sympathies are better understood.

It is repeatedly shown in these Essays, that the marks of passion and of bodily suffering are the same, and that the respiratory organs are the source of all expression, as well as of a very extensive range of symptoms in disease. Let us take an example of a

mortal affection, to which my attention was first drawn by the study of expression.

When a soldier is desperately wounded by gun-shot, or when amputation, or any other great operation of surgery is performed, a class of obscure symptoms sometimes arise, and the man dies, without the proximate cause of his death being comprehended. The cause of his death is inflammation in the lungs, but with symptoms so slight as to have no correspondence with the common description of pulmonary inflammation. There is no violent pain, no cough, no inflammatory pulse; you observe only a tremulous motion and swelling of the upper lip, and working of the muscles of the nostrils. Called to him by this sign, you find his voice feeble and his words cut; and with symptoms no more marked than these, he dies.

When we learn that the muscles about the lips and nostrils are respiratory muscles, and when we

know that a respiratory nerve goes purposely to combine these muscles with the motion of the thorax, and above all, when by such investigation of the anatomy, we find that these same motions indicate some powerful emotions of the mind, are we not prepared to be more attentive observers, and to discover such symptoms as must remain obscure to those who have no clew to them?

Perhaps it may be proper to make some apology for the sketches which accompany the text. I have often found it necessary to take the aid of the pencil, in slight marginal illustrations, in order to express what I despaired of making intelligible by the use of language merely; as in speaking of the forms of the head, or the operation of the muscles of the face. The slightness of these sketches, as they appeared in the manuscript, explained sufficiently the humble intentions of the Author. But, under the graver, they have assumed an appearance more soft and finished, than was perhaps to be desired; and certainly stand more in need of an apology for their incorrectness.

It was intended to place a sketch of hydrophobia on page 108, forgetting that the plate belonged to the subject treated of in page 126. It was necessary to fill the marginal space with another illustration of the subject, after the work was printed.

ESSAY I.

INTRODUCTORY ESSAY.

SOME ACCOUNT OF THE NERVES, AS A FOUNDATION FOR THE STUDY OF EXPRESSION.

The changes of the human countenance which accompany the exercise of the mind, afford at once the most familiar and the most interesting subject of study. But although we be continually and deeply conversant with those outward signs of emotion, we are scarcely conscious of the exertion, until by inquiry into their cause we try to recover our first impressions and to reason on them. How is it to be accounted for, that a subject more familiar to us than our mother tongue, and without which existence to most people would be indifferent and unprofitable, has not been brought into some relation with philosophy? In the author's opinion, it is to be attributed to a neglect of that close connexion which is established betwixt the operations of the mind and of the body, and to a very mistaken notion which has prevailed, that every thing interesting in anatomy has long since been discovered—that after the structure of animal bodies has been studied for so long a time,

and by a succession of so many eminent men, every thing must have been disclosed. Those who hold this opinion cannot be aware that every discovery in science opens a new field of inquiry, and that this is especially true of anatomy. No part of knowledge stands so much connected with the other departments, and is so universally dependent on discoveries in other sciences, as anatomy; if we understand by that term the knowledge of the functions as well as the structure of animal bodies.

I have regretted the influence of this opinion on our students, because it takes from them that animation and pleasure which belong to their time of life, and their peculiar studies, which, if followed as they ought to be, afford an ever new hope and prospect of discovery.

Nor ought the study of animal structure to be limited to that only which appears useful; but, on the contrary, extended in a liberal manner to all the ramifications which promise to improve our general knowledge. We never know to what useful conclusion the inquiry may lead, while it is sure to gratify us, to give rise to admiration, and a sort of involuntary praise. At one time I thought an apology was necessary for paying attention to expression, a subject of mere amusement, when I might have been more usefully employed; and now, if I shall have any reputation as a discoverer, I shall owe it principally to the views which this neglected subject has suggested to me. Here I first learned to look upon the fabric

of the human body as a combination of parts which differed essentially from things of human invention—that while the latter were pieces fitted and contrived to produce some ultimate effect, the former was cast with such perfection that each part performed many functions. I saw in the face so many different offices performed, that I began to inquire by what peculiarities of structure this was attained, and being led to examine other organs in the same manner, I laid the ground of my observations on the nervous system.

A very remarkable error has been propagated, and as long as it continued there could be little known of the machinery of expression; nothing certainly, unless through our experience of the sympathies planted in our nature. These sympathies, when followed after the manner of philosophical inquiries, or pursued as matters of taste, led to nothing, or at most to some unsubstantial theory. However excellent the works may be which set forth these theories, however to be valued for the beauties of composition, for just sentiment and classical illustration, and all the graces of a cultivated understanding, they leave us as to knowledge where we were.

The error to which I have alluded is a substantial one, being no less than a mistake as to the organs on which expression depends. There is a system of nerves extended over the frame called *sympathetic*, because they were universally believed to be the

sources of the sympathies of our organs; and, in short, the explanation of every thing obscure in physiology, pathology, or expression, was sought for in the influence of this class or system of nerves. As the nerves called sympathetic are universally spread over the body, there was no consent of parts or sympathy, from the blush of passion to the act of sneezing, but was readily assigned to the influence of some branch or network of this system of nerves; and although this opinion was universally received in all countries, it had no foundation in truth.

While there is every probability that the sympathetic system, or, as it is sometimes called, the ganglionic system of nerves, ministers to certain operations of the animal economy, it has no control over the muscular frame, either in the performance of the voluntary motions, or during that influence of the mind upon the bodily frame which we call passion.

In the volume of the Philosophical Transactions for the year 1821, there is a paper of mine which proves that, independent of the common nerves which bestow sensibility, and also of the branches of the sympathetic nerve, there is a nerve which extends from one point over the whole face, possessed of totally different powers. It is there also proved by observations made on the effects of the accidental injuries and diseases of these nerves, and also by experiments on animals, that the motions of breathing and speaking, as far as they regard the face, and all the indications of emotion

in the countenance of man, or of passion in brutes, are produced solely through the influence of this nerve. It is also shown there, that the singular course of this nerve, apart from the common nerves of the face (a circumstance always known, but not hitherto explained), is for the purpose of its being associated with a set of nerves of the same class and function with itself.

Although this nerve be the source of all those varying emotions of the countenance which indicate the condition of the mind, yet I have called it the respiratory nerve of the face, for reasons which I entreat my reader's patience until I explain; and this is the more necessary, since we shall find that the whole extended apparatus of respiration is the instrument of expression, as it is of voice and speech.

Some account of the author's discoveries in the nervous system, as directing the actions of breathing, speaking, and expression.*

In the face we have an opportunity of observing the subservience of the nerves to the different uses of the parts. The human countenance performs many functions: in it we have combined the organs of mastication, of breathing, of natural voice and speech, and of expression; some motions are performed directly by

* This will be found further illustrated in the Philosophical Transactions, vol. for the years 1821, &c.

the will; while others are signs of emotion, over which we have a very limited or imperfect control. The face serves for the lowest animal enjoyment, and reflects the highest and most refined emotions. Happily for our present inquiry, the nerves, which in other parts of the frame are bound together for the convenience of distribution to remote parts, are here distinct, and run apart from each other, until they meet at their extremities.

On turning to the plate of the nerves of the face, and consulting the explanation, it will be seen that there are two sets of nerves running upon it. One nerve comes out just before the ear, and spreads out to every part. Another nerve is not seen in its course through the head, but its four branches are seen to come out upon the face: the first above the eye, going to the forehead; the second below the eye, sent to the nose and cheek; the third branch coming out upon the chin, and the fourth before the ear.

The great nerve that comes out before the ear, and spreads over the face, does not exist in any of the lower tribes of animals unless the creature breathes by nostrils. When it exists, I have found that it does not bestow sensibility as the other nerves do; that when it is cut across, the sensibility of the skin is not diminished. But if this nerve be cut across, the motions of the nostrils which accompany the act of breathing immediately cease. On the contrary, if the other nerves which come out upon the face, branches of what is called the fifth pair, are divided, sensibility is destroyed;

and if the trunk of the same nerve be cut, the motion of the jaw is lost; but the fine motions of the face, which accord and keep time with the motions of the chest in breathing, whether awake or asleep, continue unimpaired.

When a horse has run and pants and breathes hard, the nostrils are alternately dilated and contracted, while the chest rises and falls. So in a man, excited by exercise or passion, the shoulders are raised at each inspiration, the muscles of the neck and throat are violently drawn, and the lips and nostrils move in time with the general action. Thus parts remote in situation are combined in function, and when thus united in the act of respiration, it is by means of distinct nerves appropriated to that office. The nerves which perform this function come out from where the spinal marrow joins the brain, and from thence they diverge to remote parts: to the face, the windpipe, the neck and shoulders, the outside of the chest, the diaphragm. The division of any one of these nerves cuts off the part to which it is distributed from combining in the act of respiration, without depriving it of sensibility, or impeding the forcible action of its muscles when excited by other nerves, or acting in the performance of some other function.

These nerves, from their principal function, I have distinguished by the term *respiratory nerves*, since it is solely through them that the muscles are excited to the act of breathing. But we are led to inquire what other offices the organs of respiration, and the respira-

tory nerves in particular, perform? They combine in the act of speaking without doubt, and I shall make it equally manifest that they are also the organs of expression.

In the first place, comparative anatomy, that is, the comparison of these nerves in different animals, exhibits profusion and seeming intricacy, in proportion to the animal's powers of expression. Every one must have observed, not merely the resemblance in the face of the monkey to the features of man, but also that activity and grimace, which bear the same proportion to the expression of the human countenance. The nerves of the face and neck of the monkey are numerous, and have frequent connexions. But on cutting the respiratory nerve of the face of the monkey, the features become dead to the influence of the creature's passions. Yet after such an experiment the skin is sensible, and the muscles of the jaws and tongue are capable of the actions of chewing and swallowing, only there is no grimace or expression to be seen. If the respiratory nerve of one side be cut, the expression of that side is utterly extinguished, while the chattering and mewing, the scowl of the eyebrow, and the grinning of the lips and cheek, remain on the other side.

There is a great deal of expression in a dog, whether we attend to the wistful and friendly look with which he regards his master's face, or when he is placed in fierce opposition to another dog. All the fire of expression disappears the instant that the nerve of

respiration is divided. He will fight as bitterly, but with no retraction of his lips, or sparkling of his eye, or drawing back of his ears. The face is inanimate, it does not partake of the action corresponding with the passion, though the muscles of the face and jaws, as far as they are liable to influence through other nerves, continue their offices.

By cutting the same nerve in a cat it may be deprived of all expression. If the nerve of one side of the head be cut, as it comes out before the ear, we shall see no brilliancy in the eye from the action of the eyelids, no motion of the whiskers, nor spitting in anger; although all these signs be exhibited on the opposite side.

If birds be deficient in expression, from the horny bill being substituted for the mouth and nostrils, yet they are not without some sign of passion in the rising and flutter of the feathers. The game cock, in the position of fighting, spreads a ruff of feathers round his head. The position of his head, and the feathers raised from his neck, are the expressions of hostile excitement. But on the division of the respiratory nerve the feathers are no longer raised, although the disposition to spar continues.

The accidental injury or the disease of the respiratory nerve of the face of man exhibits the same consequences with these experiments on brutes. When the respiratory nerve is injured on one side, the individual can neither laugh nor weep with that side of

the face; then the slightest smile deforms the countenance, by the unequal action of the muscles; on that side where the nerve is entire in the performance of its office, the act of smiling takes place, while the muscles of the other remain inactive, and are drawn into distortions.

In the former edition of these essays I had shown the number and complication of the muscles used as instruments of expression; but by these discoveries of distinct properties in the nerves, we see why there is a complication of nervous branches, in proportion not merely to the number of muscles to be called into action, but to the variety of uses to which they are put—the various combinations which they form, in alliance with different organs. It now appears, that by an apparatus of appropriate nerves, the muscles of the face, neck, and chest are drawn to co-operate in the act of respiration. But by these observations it is also proved, that it is through the nerves of respiration that the muscles become agents of expression; for although they can both act and feel after the respiratory nerves are cut, they no longer express passion, but remain tranquil during the utmost excess of suffering or of passion in the animal. When, therefore, we shall have proved that the organs of respiration are the organs of expression, as well as of speech, the mystery that hangs over this subject will disappear, and the motions of the countenance and of the frame of the body will be as intelligible as the natural expression of the voice.

EXPLANATION

OF

PLATE I.

BEING A VIEW OF THE NERVES OF THE HEAD.

In this plate the two distinct classes of nerves which go to the face are represented; the one to bestow sensibility, and the other for the motions of speaking and expression, that is, the motions connected with the respiratory organs.

The nerves on the side of the neck are also represented. These I have discovered to be double nerves, performing two functions; they control the muscular frame, and bestow sensibility upon the skin. Besides these regular spinal nerves, which are for the common endowments, the nerves of the throat are represented. These latter nerves are the chords of sympathy, which connect the motions of the neck and throat with the motions of the nostrils and lips; not merely during excited respiration, but in the expression of passion.

A. The Respiratory Nerve of the Face; or, according to authors, the Portio dura of the seventh nerve.

a. Branches ascending to the temple and side of the head.

b. Branches which supply the eyelids.

c. Branches going to the muscles which move the nostrils.

d. Branches going down upon the side of the neck and throat.

e. Superficial cervical plexus.

ff. Connexions formed with the cervical nerves.

g. A nerve to the muscles on the back of the ear.

B. The Eighth Nerve. Par vagum, or Grand Respiratory Nerve.

C. The Superior Respiratory Nerve, or Spinal Accessory Nerve.

D. Ninth Nerve, or Lingualis.

E. Diaphragmatic Nerve.

F. Sympathetic Nerve.

G. Laryngeal Nerve.

H. Recurrent Laryngeal Nerve.

I. Glosso Pharyngeal Nerve.

I. Frontal Nerve. A branch of the fifth.

II. Superior maxillary Nerve. A branch of the fifth.

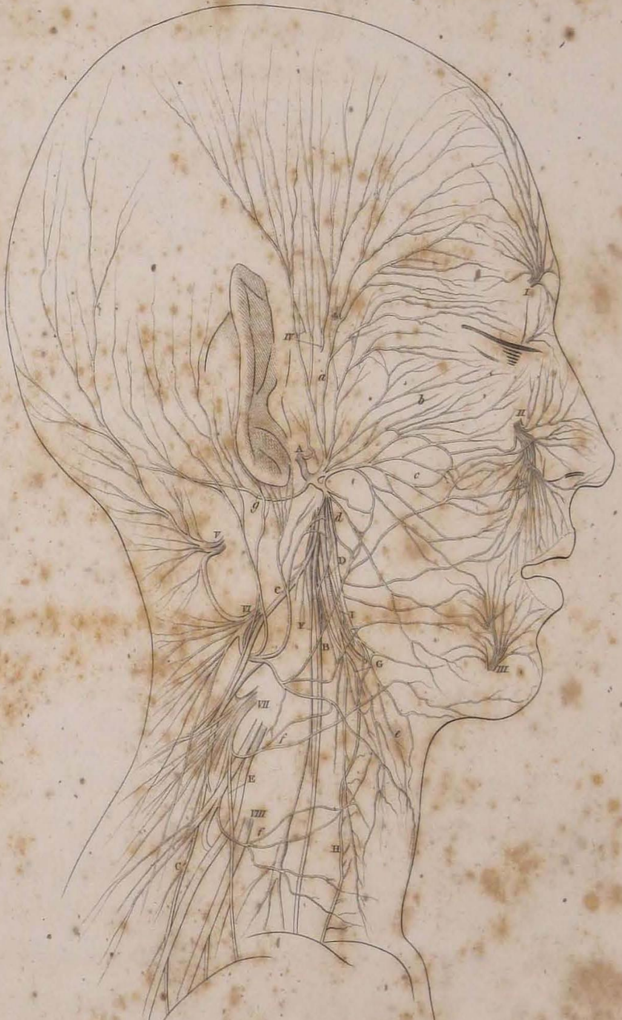
III. Mandibula labralis. A branch of the fifth.

IV. Temporal branches of the second division of the fifth.

V. The Suboccipital Nerve. The first of the Spine.

VI. The Second Spinal Nerve.

VII. VIII. Spinal Nerves.



rawn by C. Bell.

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ESSAY II.

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ON THE SOURCES OF EXPRESSION IN THE HUMAN COUNTENANCE, WHICH CANNOT BE EXPLAINED ON THE IDEA OF A DIRECT INFLUENCE OF THE MIND UPON THE FEATURES.

In the human countenance, under the influence of passion, there are characters expressed, and changes of features produced, which it is impossible to explain on the notion of a direct operation of the mind upon the features. Ignorance of the source of these changes of the features, or inattention to the cause which produces them, has thrown an obscurity over the whole of this subject, which it is my purpose in the present essay to remove, before advancing to a description of the characters of passion, as indicated in the face and in the body.

If, in the examination of the sources of expression, it should be found that the mind is dependent on the frame of the body, the discovery ought not to be considered as humiliating, or such as should affect the belief of the capacity for a separate existence of that principle on which the changes wrought in the body are

ultimately impressed. It is a fundamental law of our nature, that the mind shall be subject to the operations of the body, and have its powers developed through its influence; the organs being the links in that chain of relations betwixt the mind and the material world, without which the immaterial principle within could not be approached. Since we are dwellers in a material world, it is necessary that the spirit should be given up to the influence of a material and organized body, without which it could neither feel, nor re-act, nor manifest itself in any way.

I do not mean to affirm that all the affections of the mind have their source in the body, or their objects in the things presented to the senses. As the Creator has established these necessary relations of the mind with the materials around us, so has he implanted, or caused to be generated in us, various higher intellectual faculties. He has raised in every intelligent being emotions that point to him, affections by which we are drawn to him, and which rest in him as their end. In the mind of the rudest slave, left to the education of the mere elements around him, sentiments are developed which lead him to a parent and creator. These feelings cannot be traced to any source, they rise spontaneously, they are universal, and not to be shaken off; furnishing an instance of that adaptation of the mind to its various relations, of which many examples might be given, but none better calculated to afford us a conception of the author of our being, or tending more to raise our estimation of ourselves, as allied to him.

This it was perhaps necessary to premise, when I am about to prove the extensive influence of the corporeal on the intellectual part of man.

Philosophers, in examining the properties of the mind, have too much overlooked the influence of the body, by which is not meant what are usually called the organs of the senses, those outward parts in which are produced the corporeal processes that precede sensation—I mean the gross frame-work of the body. It appears to me that the frame of the body is a complex organ, I shall not say of sense, but of intellectual operation, very analogous to the operations of the organs of sense; that it serves for the development of certain states or conditions of the mind, as the organs of the five senses serve to furnish ideas of matter.

There is no deception in the sensations which point to whereabouts these emotions are seated. In the affections of the mind we call passions, there is an influence which "steals through the veins and fans the awakened heart." This is not asserted on the mere proof of sensation seated thus deep in our breast during the varying affections of the mind, nor on the language of mankind, which gives universal assent to this proposition; it is to be proved by circumstances in expression, in which we cannot be deceived.

I shall make it manifest, that what the eye, the ear, or the finger

are to the mind, as exciting those conceptions which have been appointed to correspond with the qualities of the material world, the organs of the breast are to the development of our affections; and without which we might see, hear, and smell, but we should walk the earth coldly indifferent to all those emotions, which may be said in an especial manner to actuate us, and give interest and grace to human thoughts and actions.

By emotions are meant certain changes or affections of the mind, as grief, joy, or astonishment. That such states or conditions of the mind proceed from or in any degree pertain to the body, may not perhaps willingly be admitted. This may be, because we are not prepared to admit that our ideas of sense, as light, sound, or taste, are generated of the organs of the senses, and not by something received and conveyed through them to the sensorium. It may therefore be necessary to reflect that the different organs of the senses can be exercised and give rise to sensation and perception, when there is no corresponding outward impression; that the ideas excited in the mind are according to the organ struck or agitated; that the same impression conveyed to different organs of sense will give occasion to a variety of ideas,—light, when the eye is struck, sound, when the ear is struck, to ideas corresponding with the organs exercised, not with the impression. A needle passed through the retina, the organ of vision, will produce the sensation of a spark of fire, not of sharpness or of pain; and the same needle may exercise

other organs, as the papillæ of taste on the tongue, or those of touch in the skin; and with each there will be a new or distinct impression.

Whilst we continue to believe that something is conveyed through the organs of the senses to the sensorium, we must have a very imperfect conception of the influence of the organization of the body in eliciting or developing the activity of the mind. But when we observe that the organs of the senses have an operation on the mind, independent of external circumstances, we can better comprehend how other organs of the body have a relation established with the mind, and a control over it independent of outward impressions.

Let us consider the heart in its office of receiving the influence of the mind, and of reflecting that influence.

It is a singular fact in the history of physiological opinions, that the heart, an organ the most susceptible in the whole frame, whether excited by the emotions of the mind, or the agitations or derangement of the body, should have been considered as insensible. And yet in one sense this is true; to touch it is insensible, as was exhibited to the illustrious Harvey in the person of a young nobleman who had the heart exposed by an abscess. This single circumstance, had there been no more, should have earlier directed the minds of physicians to a correct view of this matter, by proving to

them that the internal organs are affected and united by sensibilities different in kind from those which are bestowed upon the surface of animal bodies; the external sensibility being only one of those many endowments with which animals are furnished to correspond with the elements around them. Though the heart has no common sensibility, yet we have proof that by its peculiar sensibilities it is held united in the closest connexions and sympathies with the other vital organs—that it participates in all the changes of the general system, and is affected by the passions of the mind.

Connected with the heart, and depending upon its peculiar and excessive sensibility, there is an extensive apparatus of muscles and nerves. These constitute the organs of breathing and of speech obviously; but I shall prove that they are more—that they are the organs of expression, and necessary to the development of emotions, of which by their activity they become the outward signs.

We discover that certain states of the mind produce sensation in the heart, and through that corporeal influence, directly from the heart, indirectly from the mind, an extensive class of agents are put in motion. We find this influence has sway, at so early a period of our existence, that we shall be forced to acknowledge that the operation or play of the organs of expression precede the mental emotions with which they are to be joined, accompany them in their first dawn, strengthen them, and direct them; and thus it is not

perhaps too much to conclude that the organs of the body, which move in sympathy with the mind, produce the same uniformity among men in their internal feelings and emotions or passions, as there is in their ideas of external nature through the uniform operations of the organs of sense.

Let us place examples before us, and then try whether the received doctrines of the passions will furnish us with an explanation of the phenomena, or whether we must go deeper, and seek the assistance of anatomy.

In the expression of the passions there is a compound influence in operation. Let us contemplate the expression of terror. We can readily conceive why a man stands with eyes intently fixed on the object of his fears, the eyebrows elevated to the utmost, and the eye largely uncovered; or why, with hesitating and bewildered steps, his eyes are rapidly and wildly in search of something. In this we only perceive the intent application of his mind to the object of his apprehensions—its direct influence on the outward organ. But observe him further: there is a spasm on his breast, he cannot breathe freely, the chest is elevated, the muscles of his neck and shoulders are in action, his breathing is short and rapid, there is a gasping and a convulsive motion of his lips, a tremor on his hollow cheek, a gulping and catching of his throat; and why does his heart knock at his ribs, while yet there is no force of circulation?—for his lips and cheeks are ashy pale.

So in grief, if we attend to the same class of phenomena, we shall be able to draw an exact picture. Let us imagine to ourselves the overwhelming influence of grief on woman. The object in her mind has absorbed all the powers of the frame, the body is no more regarded, the spirits have left it, it reclines, and the limbs gravitate; they are nerveless and relaxed, and she scarcely breathes; but why comes at intervals the long drawn sigh?—why are the neck and throat convulsed?—what causes the swelling and quivering of the lips, and the deadly paleness of the face?—or why is the hand so pale and earthly cold?—and why, at intervals, as the agony returns, does the convulsion spread over the frame like a paroxysm of suffocation?

It must, I think, be acknowledged, when we come to arrange these phenomena, these outward signs of the passions, that they cannot be traced to the direct influence of the mind. However strange it may sound to unaccustomed ears, it is to the heart and lungs, and all the extended instrument of breathing, that we are to trace these effects.

Over these motions of the body the mind has an unequal control. By a strong effort the outward tokens may be restrained, at least in regard to the general bearing of the body; but who, while suffering, can retain the natural fulness of his features, or the healthful colour of his cheek, the unembarrassed respiration and clearness of the natural voice? The villain may command his voice,

and mask his purpose with light and libertine words, or carry an habitual sneer of contempt of all softer passions; but his unnatural paleness, and the sinking of his features, will betray that he suffers. Clarence says to his murderers, "How deadly thou dost look!—Speak! your eyes do menace me—Why look you pale?"

The just feelings of mankind demand respect; men will not have the violence of grief obtruded on them. The actor, to preserve the dignity of his character, must permit only those uncontrollable signs of inward suffering to escape, betraying how much he feels, and how much he restrains.

Even while asleep, these interior organs of feeling will prevail, and betray the source of muscular expression. Has my reader seen Mrs. Siddons in Queen Katherine during that solemn scene, while the sad note is played which she named her knell? Who taught the crowd sitting at a play, an audience differing in age, habits, and education, to believe those quivering motions, and that gentle smile, and those slight convulsive twitchings, to be true to nature? To see every one hushed to the softest breathing of sympathy with the silent expression of the actress, exhibits all mankind held together by one universal feeling, and that feeling excited by expression so deep laid in our nature, as to have influence without being obvious to reason.

To illustrate this curious subject, I shall first explain the ex-

tensive connexions which are established betwixt the great organs that sustain life and the muscular system. I shall then show that the functions of these organs are affected by passions of the mind. I shall prove that this connexion subsists at the moment of birth, and accompanies us through life; and, finally, that from this source are derived those hitherto obscure indications of emotion in the countenance and general frame, which cannot be explained on the supposition of a direct influence of the mind on these muscles of expression.

The heart and the lungs may be safely taken as two parts which are combined in the same function. The action of the heart and the motion of the lungs are equally necessary to the circulation of that blood, which is fitted for the supply of the body, and the interruption of their motions threatens life. Accordingly, these two organs are united by nerves, and consequently by the closest sympathy; and in all the variations to which they are liable they are still found to correspond, the accelerated action of the one being directly followed by the excitement of the other.

The motion of the lungs proceeds from a force altogether external to these organs: the lungs themselves are passive; they are moved by a very great number of muscles which lie upon the breast, back, and neck; these muscles give play to the bones of the chest, and the lungs follow the motions of the chest. The heart and lungs, though insensible to common impression, yet

being acutely alive to their proper stimulus, they suffer from the slightest change of posture or exertion of the frame, and also from the changes or affections of the mind. The impression thus made on these internal organs is not visible in its effect upon them, but on the external and remote muscles associated with them. This law embraces all mankind; we see the consequence in those susceptible and nervous persons, whom the mere change of position, or the effort of rising, or the slightest emotion of mind, flutters and agitates. But it is when the strong are subdued by this mysterious union of soul and body, when passion tears the breast, that the most afflicting picture of human frailty is presented, and the surest proof afforded that it is the respiratory organs on which the influence of passion falls with so powerful an expression of agony.

The next circumstance of this detail to which I beg my reader's attention, is the extent of the actions of respiration, the remoteness of the parts agitated in sympathy with the heart. The act of respiration is not limited to the trunk; the actions of certain muscles on the windpipe, the throat, the lips, the nostrils, are necessary to expand those tubes and openings, so that the air may be admitted through them in respiration, with a freedom corresponding with the increased action of the chest. Without this, the sides of these pliant tubes would fall together, and we should be suffocated by exertion or passion. Let us consider how many muscles are combined in the simple act of breathing—how many are added in the act of coughing—how these are changed and

modified in sneezing;—let us reflect on the various combinations of muscles of the throat, windpipe, tongue, lips, in speaking and singing, and we shall be able justly to estimate the extent of the muscles which are associated with the proper or simple act of dilating and compressing the chest. But how much more numerous are the changes wrought upon these muscles, if nature employs them in the double capacity of expression; not in the language of sounds merely, but the language of expression in the countenance also; and certainly the one is as much their office as the other.

By what nervous cords these muscles are combined, it would be superfluous to describe here. The labour of many months discloses but a part of them; and the display, and the consideration of the uses they serve, present the most overwhelming proof of the excellence of design,—but a design made manifest by the results, rather than comprehensible in its means. Can we perfectly comprehend how tickling the throat should produce a convulsion over the whole frame, in which a hundred muscles are finely adjusted and proportioned in their actions to expel what irritates the windpipe? or do we comprehend how tickling the nostril should make a change in these muscles, throw some out and bring others into action, to the effect of sending the air through a different tube to remove what is offensive there? and all this without the act of the will!

Let us now see how the machine works. Observe a man threat-

ened with suffocation: see the sudden and wild energy that pervades every feature; the contractions of his throat, the gasping and the spasmodic twitchings of his face, the heaving of his chest and shoulders, and how he stretches his hands and catches like a drowning man. These are efforts made under the oppressive, intolerable sensation at his heart; and these the means which nature employs to guard and preserve the animal machine, giving to the vital organ a sensibility that irresistibly animates to the utmost exertion.

It is this painful sensation that introduces us to "this breathing world," which guards the vital functions through life as it draws us into existence. Pain is the agent which most effectually rouses the dormant faculties of both mind and body. While the child slumbers in the womb it does not live by breathing, it possesses an organ which performs the office of the lungs. In the birth there is a short interval, betwixt the loss of the one organ, and the substitution of the other; nor would the breath ever be drawn, or the lungs perform their function, but for this painful and irresistible *nisus*, which calls the whole corresponding muscles into action. Spasms and contractions are seen to extend over the infant's chest; the features are working, and the muscles of the face agitated, probably for the first time; at last air is admitted into the lungs, a feeble cry is heard, the air in successive inspirations fully dilates the chest, and the child cries lustily. Now the regular inspiration is established, and the animal machinery subsides into repose. With the revolution

which the whole economy has undergone new wants are engendered, new appetites, &c.; these are again lulled by the mother's breast. During all this no one sympathises with the little sufferer, the grimace with which he enters the world excites only smiles.

> "On parent's knees, a naked new-born child,
> Weeping thou sat'st, while all around thee smiled—
> So live, that sinking in thy last long sleep
> Calm thou may'st smile, when all around thee weep."
>
> *From the Persian.*

"Anger," says Lord Bacon, "is certainly a kind of baseness, as it appears well in the weakness of those subjects in whom it reigns—children, women, old folks, sick folks." But this I may say, that anger is at no period of life so strongly impressed upon human features as in the first moment of our visiting the light. At that instant an association of muscles is formed, or then put into operation, which stamps a character of expression that continues for life, betraying the wants of the body in early infancy, and the sufferings of the mind in the after period. The frame of the body, constituted for the support of the vital functions, becomes the instrument of expression; and an extensive class of passions, by influencing the heart, by affecting that sensibility which governs the muscles of respiration, calls them into co-operation, so that they become an undeviating and sure sign of certain states or conditions of the mind. They are the organs of expression.

Returning now to the contemplation of any of the stronger passions, we comprehend much which was before obscure. We see how that grief which strikes the heart should affect the regularity of breathing—why the muscles of the throat should be affected with spasm—why slight quivering motions pass from time to time over the face, the lips, and cheeks, and nostrils;—because these are the organs of respiration, organs which have their muscles united to the sensibility of the heart, and moved under its influence. Now we comprehend how the passion of rage or terror binds and tightens the chest, why the features are so singularly agitated by the indirect as well as by the direct influence of the passions—how the words are cut—how the voice sticks in the throat—how the paralysed lips refuse the commands of the will, so that they are held in a mixed state of violence and weakness, which, more than any fixed expression, characterizes the influence of the passion.

ESSAY III.

ESSAY III.

OF THE MUSCLES OF THE FACE IN MAN AND IN ANIMALS.

The fleshy or muscular part of the animal frame is a peculiar fibrous substance; and of the various textures, it alone possesses power of contraction, and consequently of producing motion. In the limbs and trunk the muscles are distinct and powerful, having their tendons attached to the bones, and performing the various voluntary movements. In the face they are more delicate; their action being merely to operate on the skin, the lips, and eyelids, they require less power; and that power is not always, as in the muscular exertions of the body and limbs, directly under the will, but often involuntary and inseparably united to the conditions or affections of the mind. It is this latter consideration which gives so much interest to this subject. By the form of the head we shall presently find that nature has been provident of an excellence in that organ on which the mind and superior intelligence of man depend, so in the muscles of the face there is a provision for a superiority of expression; and

thus the very spirit by which the body is animated, and the signs of the various affections of the mind, shine out in the countenance.

This superiority of expression in the face some would have to be an accidental result; they say, that the muscles prepared for mastication and speaking give such a superiority of muscular apparatus to the human face, as to account for the superiority of expression. But I have put that question to rest, by observations and experiments upon the nerves*. That the muscles used in speaking are those of expression may be readily allowed; but there are also muscles of expression, which have nothing to do with the voice, and which are purely indicative by signs of the operations of the mind. Further, we shall find that the countenance of man is not merely pre-eminent by the possession of powers peculiar to him, but also by this, that he stands intermediate betwixt the two great classes of animals, possessing the muscular system of both combined.

It is only necessary for the reader to understand that the muscles are formed of distinct packets of fibres or fasciculi, and that their extremities are called their origin and insertions: the fixed extremity, attached generally to some point of bone, is the origin; the extremity which moves is the insertion of the muscle.

* Philos. Transactions.

EXPLANATION

OF

PLATE II.

OF THE MUSCLES OF THE FACE.

THIS plate represents the muscles of the face as they appear in a front view.

The EYEBROW is most distinctly a character designed for expression. We find certain muscles attached to it, which produce its various motions and inflexions.

A. The FRONTAL MUSCLE. This is a thin muscle, which is expanded over the forehead, and inserted into the skin under the eyebrow. We do not see here the whole of the muscle, but only a part of what is properly called *Occipito-frontalis.*

The OCCIPITO-FRONTALIS MUSCLE arises in a fleshy web of fibres, from the back of the skull (from a ridge of the temporal and

occipital bones): becoming tendinous, it covers all the upper part of the skull with a membrane or sheet of tendon, and terminates in the anterior muscle, which is seen in this view.

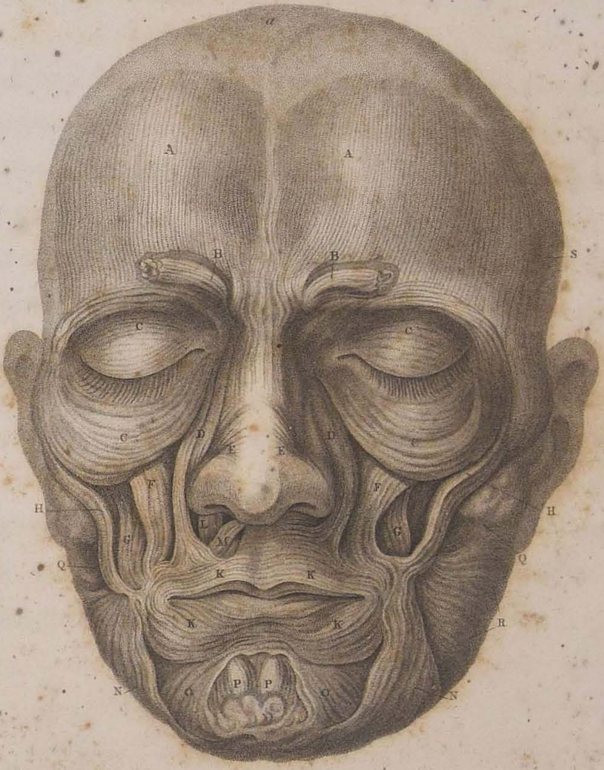
B. B. The CORRUGATOR SUPERCILII is the second muscle attached to or inserted into the integument under the eyebrow. It arises from the lower part of the frontal bone near the nose, and is inserted as I have said. It lies nearly transverse, and its office is to knit and draw the eyebrows together.

C. C. The CIRCULAR MUSCLE OF THE EYELIDS, (the ORBICULARIS PALPEBRARUM). There is a little tendon in the inner angle of the eye, which is a fixed point for this muscle, attaching it to the maxillary bone, and being both origin and insertion.

The DESCENDING SLIP OF THE OCCIPITO FRONTALIS. As this fasciculus of fibres descends from the frontal muscle to be attached to the side of the nose, it has a distinct operation, and may be considered as a distinct muscle. It draws the inner extremity of the eyebrow downwards.

These four muscles move the eyebrow, and give it all its various inflexions. If the *Orbicularis Palpebrarum* and the *descending slip* of the *Frontalis* act, there is a heavy and lowering expression. If they yield to the influence of the *Frontal muscle*, the eyebrow is arched, and there is a cheerful or an alert and inquiring expression.

Plate II.d



Drawn by Charles Bell

Engraved by John Stewart

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If the *Corrugator Supercilii* acts, there is more or less of mental anguish, or of painful exercise of thought. If combining with the *Frontalis*, the forehead is furrowed, and there is an upward inflection of the inner extremity of the eyebrow, there is more of querulous and weak anxiety indicated.

The arched and polished forehead, terminated by the distinct line of the eyebrow, is a table on which we may see written, in perishable characters, but distinct while they continue, the prevailing cast of thought; and by the indications here, often the mere animal activity displayed in the motions of the lower part of the face, has a meaning and a force given to it.

Independent of the actions of the muscles, their mere fleshiness gives character to this part of the face. The brow of Hercules wants the elevation and form of intelligence; but there may be observed a fleshy fulness on the forehead and around the eyes, which conveys an idea of dull brutal strength, with a lowering and gloomy expression, which accords with the description in the *Iliad*.

MUSCLES OF THE EYES.

The *Orbicularis Palpebrarum* I divide into two muscles: the outer fleshy circular band, which runs around the margin of the orbit; and the lesser band of pale fibres which lies upon the eyelids. These last are employed in the act of closing the eyelids, but the

former is only drawn into action in combination with the other muscles of the face in expressing passion, or in some convulsive excitement of the organ. In laughing and crying the outer and more powerful muscle is in action, gathering up the skin about the eye, and forcing back the eyeball itself.

In drunkenness, which produces a sort of temporary paralysis, the eyelids are disposed to close, and there is an attempt to raise the upper eyelid by a forcible elevation of the eyebrow; and very often the character is completed by an unequal elevation of the eyebrows. We may observe this in Hogarth's print of A Midnight Modern Conversation, Gin-lane, and several others.

So in the exhausted state of long suffering the heavy eyelid, half covering the pupil, and elevated eyebrow, are indicative of great weakness and dejection.

MUSCLES MOVING THE NOSTRILS.

D. Marks a muscle which arises from the upper jaw, and descends to be attached to the upper lip and the nostril. From this it is called LEVATOR LABII SUPERIORIS ALÆQUE NASI. It raises the upper lip and the nostril.

E. A set of fibres which compress the nostril, viz. COMPRESSOR NASI.

The Depressor Alæ Nasi cannot be seen in this plate, as it lies under the *orbicularis oris.* It arises near the alveoli of the incisor teeth, and is inserted into the moveable cartilage which makes the nostril.

These three muscles serve to expand and contract the tube of the nostril. They move in consent with the muscles of respiration, and thus the inflation of the nostrils indicates general excitement and animal activity. The expression in the dilated nostril gives spirit to the whole countenance; it implies a preparation for activity in the whole frame.

MUSCLES OF THE LIPS.

F. The Levator Labii Proprius. It arises from the upper jaw bone near the orbit. It is attached to the upper lip exclusively; it raises the upper lip.

G. The Levator Anguli Oris. This muscle, lying under the last, is of course shorter: it raises the angle of the mouth.

H. The Zygomatic Muscle; so called because its origin is from the Zygomatic process of the cheek bone. It is inserted into the angle of the mouth.

There is sometimes an additional muscle of this name—the Zygomaticus Minor.

These last muscles form a class; they raise the upper lip and the angle of the mouth so as to expose the canine teeth even in man. We shall find them to be very strong in the carnivorous animals, while there is no such action to be performed in the milder class of graminivorous animals. If these muscles be in action contrary to the circular fibres of the lips, there is a painful and bitter expression; but if they are influenced along with the orbicularis oris and orbicularis palpebrarum, if the former of these muscles be relaxed, and the other contracted, there is a fulness of the upper part of the face, and a cheerful smiling expression of countenance.

K. The Orbicularis Muscle of the lips. This is a circular muscle, which forms much of the fleshy substance of the lips. It closes the mouth; when allowed to act fully, it purses the lips; it is the antagonist or opponent to the other muscles which are inserted or fixed into the lips.

L. The Nasalis Labii Superioris. This muscle draws down the septum of the nose, and belongs to a former class of muscles.

N. Triangularis Oris, or Depressor Labiorum. A strong muscle arising from the base of the lower jaw, and inserted into the angle of the mouth.

O. Quadratus Menti, or depressor of the lower lip.

P. The Levatores Menti. These are small but strong muscles, which, arising from the lower jaw near the alveolar processes of the incisor teeth, descend, and are fixed into the integument

of the chin; so that by their action they throw up the chin and project the lower lip.

Q. The BUCCINATOR, is a muscle which forms the flesh of the cheek. It is principally for turning the morsel in the mouth, and is particularly strong in the graminivorous and ruminating animals. In broad laughter it retracts the lips.

These are muscles of mastication no doubt, but their perfection arises from their adaptation to speech and expression. The orbicularis muscle is singularly affected in the various emotions of the mind, trembling and relaxing, both in joy and grief. It relaxes pleasantly in smiling; it is more drawn by the superiority of its opponent in weeping.

The union of so many muscles in the angle of the mouth produces the fleshy prominence so peculiar to those who have a thin face, and are at the same time muscular. When the cheeks are fat and full, it is the action of these muscles which produces the dimpled cheek.

The angle of the mouth is full of expression, as the orbicularis, the superior, or the inferior class of muscles attached here, have the preponderance in action.

The Triangularis muscle and the Levator Menti combining, give rise to expression peculiar to man. The angle of the mouth

G

is drawn down, and the lip arched and elevated, and hence the most contemptuous and proud expression.

R. The TEMPORAL MUSCLE. A strong muscle, closing the lower jaw. It is assisted by the MASSETER muscle, which lies on the outside of the lower jaw, and which arises from the jugum, and is inserted into the angle of the jaw.

OF THE EXPRESSION OF THE HUMAN EYE.

Although I have made some remarks on the motions of the eyebrows and eyelids, the subject admits of a deeper interest, for the motion of the eyeball in conjunction with the eyelids has been quite overlooked. The eyeball has one set of muscles for moving it under the influence of the will, and to direct its axis to objects. It has another class of muscles, which are involuntary in their operations, and those move the eye in an insensible manner, for the purpose of preserving the organ, as I have elsewhere shown *. The muscles, which perform the involuntary rolling motions of the eyeball, have connexion through the fourth nerve with the system of respiratory nerves; and that is equivalent to saying, with the nerves of expression.

In all violent and excited conditions of the organs of breathing, the eye by the influence of this nerve is turned up, and this is the

* Philos. Transactions.

reason of a very striking coincidence in the features of expression—the rolling upwards or elevation of the eyeball in all powerful emotions of the mind, during which the respiratory organs suffer disturbance; in that agony which is shown by sighing or deep inspiration, by a certain modification of the lips, and expansion of the nostrils: whether it comes from pain of body or mental suffering, the pupils of the eyes are raised and half obscured by the eyelids.

This sometimes imposes the necessity of a certain position of the head; for to direct the eye downwards at the time that the agony experienced tends to drag it upwards, are inconsistent conditions of the muscular system of the eye. In bodily pain, as well as in certain conditions of mental suffering, the eye is directed upwards, and therefore the natural position of the head is forwards. During a lecture I sketched these outlines with chalk to illustrate this fact; and, however faulty, I could not improve them. The engraver has transferred them to the margin.

The muscles which turn up the eyeball under the upper eyelid during sleep being involuntary muscles, they prevail whenever the voluntary muscles are enfeebled or relaxed. This is the reason that during the influence of depressing passion, as for example grief, when the body and limbs are flung relaxed, the pupil is raised at the same time that the eyelid hangs low. We see this in some fine heads of the Magdalen, a favourite study of the old painters, where the eyelids are livid and swollen with weeping, and the eye, still

swimming in tears, is half raised and concealed; and if an object be then contemplated, the face is inclined forwards, and the heavy eyelid is raised to accommodate the position of the pupil, which is elevated by the influence of the prevailing passion.

EXPLANATION

OF

PLATE III.

OF THE MUSCLES OF THE FACE OF BRUTES.

THE head of a dog is taken to show the muscular apparatus of carnivorous animals.

A. A. The circular fibres, which surround the eyelids, and which are common to all animals.

B. C. D. Accessary muscles, which I have called SCINTILLANTES, as they draw back the eyelids from the eyeball, and give a sparkling fierceness to the eye.

Artists bestow an expression on the eye of the lion, which they suppose gives dignity—a kind of knitting of the eyebrows, whilst the eyelids are straining wide. This is quite incompatible with the powers of expression possessed by brutes. When the lion closes his

eyes in repose, the fleshiness about the eyelids and the hair of the skin produces an appearance similar to the morose human expression, but when he is excited, and the eye strains wide, there is no such character.

F. G. H. MUSCLES OF THE EAR.

I. K. The mass of muscular fibres, which is always the strongest in this class of animals, and which with those concealed under them, I call RINGENTES. These are the snarling muscles; they raise and expose the teeth with the savage expression peculiar to this class of animals.

L. The muscles which move the nostril in smelling.

M. The circular fibres of the mouth, which yet do not make a perfect ORBICULAR MUSCLE.

N. A muscle which answers to the ZYGOMATICUS in man, and which must have great power in this animal, as it reaches from the ear to the angle of the mouth. It opens the mouth, retracts the lips, and disengages them from the teeth, as in seizing their prey.

O. The CUTANEOUS MUSCLE, which sends up a web of fibres from the neck upon the side of the face. These fibres are much stronger than in man.

I observed above that some painters have thought it allowable to give human expression to the heads of lions, and others have presented human character in their heads of horses. I conceive

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this to be done upon a mistaken principle, nor will it ever enhance the peculiar beauty of the animal to engraft upon it some part of human expression. Rubens, in his picture of Daniel in the lion's den, has given human expression to the heads of the lions. Notwithstanding, it appears to me more than doubtful, whether the mingling of human expression with the features of the savage animals be in the true spirit of that principle of association, which should govern the adaptation of expression and character in producing an ideal form. However this may be determined, there seems to me a distinction to be preserved when the lion is represented in its natural state, and when sculptured emblematically. Represented in his den, or in the forest, the picture should possess all the natural character; a difference may be made when he is couched amidst the insignia of empire.

A horse's head is added to this section in illustration. It is taken from Julio Romano; and we find that in representing the horse he has produced an ideal head. We say that it is a horse rather because there is a bridle in the mouth than because we recognise the natural character of that animal. Instead of the full clear eye standing prominent upon the temple, we see an eye sunk deep, with an overhanging eyebrow; the character entirely human, and the expression thoughtful and suspicious. In the hair of the forehead, and in the ears, in the roundness of the head and neck, the artist has preferred the model of the antique to what, in this instance, we must consider to be the finer forms of nature. We have here the nostrils of the

horse, but they want expansion; and what is most monstrous of all, thick and fleshy lips are given, and an open mouth, which no power of association can ever teach us to admire.

There is a spirit in the expanded nostril, a fire in the eye; a kind of intelligence in the horse's head taken altogether; there is a beauty in the form of the neck, and an ease and grandeur in the carriage of the head, where strength and freedom are combined, which I am afraid cannot be excelled by the substitution of an ideal form. No doubt the painter in this instance wished to avoid that commonness of form, which represses the elevation of sentiment in the beholder, and destroys the poetical influence of the picture; but it is attempted here at too great an expense of truth. It may be remembered, that in the utmost excitement of animals of this class they will not open the mouth. They cannot breathe through the mouth, a valve in the throat prevents it, so that animation will be exhibited only in the nostril and the eye. The opening of the mouth is from the checking of the bit betwixt their teeth, and will never be seen when the horse is untrammeled and free.

Such were the opinions delivered in the first edition of this work, and they were drawn from an observation of nature, on which I always rest with absolute reliance. Since that time, the Elgin collection of sculptures has arrived in this country. These remains of antiquity are of great value to the arts of this country, as they obviously tend to turn the artist's attention to nature, and exhibit

to him the consistency of natural form and beauty. The horse's head in that collection is perfectly natural, and if there be exaggeration, it is only in the stronger marking of that which is the natural distinction of the animal*.

* Mr. Haydon has published an essay in French, drawing a comparison betwixt the head of the Venetian horses, and those from the ruins of Athens. He shows that the sculpture of the head in the latter is in the better times of Grecian art, when they respected the beautiful in nature; and he has done me the honour of sustaining and amplifying my opinions on this subject.

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EXPLANATION

OF

PLATE IV.

OF THE MUSCLES OF THE FACE OF BRUTES.

The first figure of this plate is a sketch by Mr. Northcote, and exhibits the natural character of the horse's head, in illustration of the anatomy demonstrated in the second figure.

Fig. 2. represents the muscles of the horse's head.

A. A. The orbicular muscle of the eyelids.
B. An accessory muscle to raise the eyelid.
C. A very peculiar muscle, since it pulls down the eyelid.
D. A muscle connected also with the eye, and arising from the cartilages of the ear.
E. A muscle answering to the zygomatic muscle in man.

These muscles, surrounding the eyelids of the horse, account for the superior expression of the eye. The muscle D seems to be calculated to operate upon the outer angle of the eyelids, and to enable the animal to direct the eye backwards: in this it is probably assisted by the muscle E.

F. This forms a class of muscles which descend on the side of the face, and are inserted into the nostril.

G. G. Muscular fibres, also operating in the distention of the tube of the nostril.

H. A strong muscle, which acts upon the cartilage, and distends the nostril with great power.

There is something in the distribution of these muscles which illustrates the character of the class, and accounts for the peculiarity of expression. We cannot fail to observe the difference in the general direction and classing of the muscles of the face in the horse and in the dog. In the carnivorous animal they all tend to lift the lips from the canine teeth, so that they cannot act without showing the teeth with the snarling expression; here, on the contrary, muscles having the same place and origin pass to the cartilages of the nose, and inflate it the instant that they are excited. It is therefore these muscles, more than any other circumstance, that produce the very different character and expression of the two classes of animals, the Carnivorous and Graminivorous.

I. A strong muscle, which lies under those of the nostril F. Its tendon passes forward over the nose, and unites with its fellow of the other side. These together form a broad tendon, which is inserted into the upper lip. There is a similar muscle moving the lower lip, which cannot be seen in this view.

L. M. The circular fibres of the lips, which in the horse are particularly strong and fleshy.

N. A web of muscle, which is extended from the cutaneous muscle of the neck.

The muscles I. K. L. M. have all great power, and give extensive motion to the lips. K. is the tendon of the muscles of the upper lip, which I have called DEPASCENTES: it takes this course over the nose in a manner quite peculiar to this class of animals, to raise and project the lip as in gathering its food. Any one who feeds his horse from his hand may feel the singular sensitiveness and mobility of his lips.

Looking to these muscles, and contrasting them with the animated sketch above it, we cannot fail to see how much the form of the head has to do with the teeth—small forward, and large and deep set in the back part of the jaw; and how much the peculiarity of expression of the animal is owing to the breathing through the nostril, and not through the mouth; and to the brilliant eye placed on the utmost projection of the head, and which, by the slightest turn of the pliant neck, is directed backward; and, finally, how the

muscles conform to these offices—1. In drawing back the eyelids—2. In expanding the nostrils with unusual freedom—3. In the power of projecting the lips from the incisor teeth, and in a certain muscularity in the cheek, which is necessary to put the food under the operation of the grinding teeth.

ESSAY IV.

ESSAY IV.

OF THE EXPRESSION OF PASSION, AS ILLUSTRATED BY A COMPARISON OF THE MUSCLES OF THE FACE IN MAN AND IN ANIMALS, AND OF THE MUSCLES PECULIAR TO MAN, AND THEIR EFFECTS IN BESTOWING HUMAN EXPRESSION.

The violent passions mark themselves so distinctly on the countenance, both of man and of animals, that we are led even in the very first inquiry to consider the movements by which they are indicated, as certain signs or characters provided by nature for the express purpose of intimating the internal emotion; and to suppose that they are interpreted by the observer, in consequence of a peculiar and instinctive faculty. This view, however, which appears to me so natural and just, is not received; an opposite theory has prevailed, in which instinctive agency is rejected, and the appearances are explained from a consideration of the necessities and the voluntary exertions of the animal. With regard to the observer, it has been asserted, that it is by experience alone that he distinguishes the signs of the passions; that we learn, while infants, to consider smiles

as expressions of kindness, because they are accompanied by acts of beneficence, and by endearments; and frowns as the contrary, because we find them followed by blows; that the expression of anger in a brute is only that which has been observed to precede his biting, and that of fondness, his fawning and licking of the hand. With regard to the creature itself, it is said, what have been called the external signs of passion are merely the concomitants of those voluntary movements, which the passion or habits suggest; that the glare of the lion's eye, for example, is the consequence of a voluntary exertion to see his prey more clearly—his grin or snarl, the natural motion of uncasing his fangs before he uses them. Men will reason in this manner who have not duly considered the instrument or apparatus of expression. But, on the other hand, the power over the voluntary muscles may be retained, while the expression is destroyed; and although the muscles serve two purposes which may be confounded, there is no expression, properly so called, unless these muscles be moved by an appropriate nerve of expression.

Attending merely to the evidence furnished by anatomical investigation, a remarkable difference is to be found between the anatomy and range of expression in man and in animals: In the former, there seems to be a systematic provision for that mode of communication and that natural language, which is to be read in the changes of the countenance; there is no emotion in the mind of man which has not its appropriate signs; and there are even

muscles in the human face, to which no other use can be assigned than to serve as the organs of this language.

In brutes the strongest and most marked expression is that of rage; the object of which is opposition, resistance, and defence. But on examination it will be found that the strength of the expression is in exact proportion to the strength of the principal action in the creature when thus excited.

The graminivorous animals, which seek their subsistence not by preying upon others, nor by the ferocity, contest, and victory which supply the carnivorous with food, have in their features no strong expression of rage. Their expression is chiefly confined to the effect produced on the general system. Thus the inflamed eye and the breathing nostrils of the bull are induced by the general excitement. His only proper expression of rage is in the position of the head, with the horns turned obliquely to the ground, ready to strike; and indeed it may be observed in general, that animals which strike with the horns show little indication either of fear or rage, except in the position of the head, and in the excitement of the eye; for the breath ejected from the expanded nostril is the consequence of mere exertion, and may belong to different conditions of the frame. In all graminivorous animals, the skin of the head is closely attached to the skull, and capable only of very

limited motion: the eye is almost uniformly mild, and the lips are unmoved by passion.

It is in the carnivorous animals, with whose habits and manner of life ferocity is instinctively connected, as the great means of their subsistence, that rage is distinguished by the most remarkable strength of expression. The eyeball is terrible, and the retraction of the flesh of the lips indicates the most savage fury. The excitement of the respiratory organs, the heaving and agony of breathing, the deep and harsh motion of the air drawn through the throat in the savage growl, indicate the universal excitement of the animal. It is quite wrong to imagine that the whole of this is a mere preparatory exposure of the canine teeth. I believe brutes to have expression, properly so called, as well as man, though in a more limited degree. In them, however, the expression is so moulded to their natures and their necessities, that, on a superficial consideration, it seems accessory to their needful and voluntary actions. But if expression in them were a mere voluntary act, and the snarl of the carnivorous animal a mere uncasing of the fangs, like the unsheathing of the sword, then would the expression be perfect as long as the voluntary power remained in the muscles. Yet this is not the case.

The horse is universally considered a noble animal, as he possesses the expression of courage without the ferociousness of the beast of prey; and as there is expression in his eye and nostril,

accompanied by that consent between the motions of the ear and the eye, which so much resembles the exertion of mind, and the movements of the human countenance. But even this more perfect expression is the result of an incidental consent of animal motions, and is no more a proof of peculiar intelligence than the diminutive eye and the unexpressive face of the elephant. We admire it because there is as much animation as in the tiger, without the ferocity. The consent of motions between the eye and the ear of the horse is a physical consequence of the necessities of the animal. His defence lies in the hind feet, and there is a peculiar provision both in the form of the skull, and in the muscles, for that retroverted direction of the eye, which seems so peculiarly expressive in the horse, but which is merely intended to guide the blow: and from the connexion of muscles, the ear must consent in its motion with this expression of the eye. The fleshiness of the lips, and of the nostrils of a horse, and the inflation of the nostril, are merely incidental to the peculiar provisions for the animal's respiration, and to the necessary motions of the lips, suited to the habits of his life.

In man we see united not only all the capacities for expression, and all the incidental and necessary effects of the several motions of features, which are to be found in the several classes of quadrupeds, but we find besides, several peculiar muscles, to which no other office can be assigned, than to act as organs of expression; to serve as instruments of that universal language which has been called

instinctive, which at least produces something like the effect of innate sympathy, and seems to be independent of experience or arbitrary custom. It is, in short, of man alone that we can with strict propriety say, the countenance is an index of the mind, having expression corresponding with each emotion.

OF THE MUSCLES OF ANIMALS COMPARED WITH THOSE OF MAN.

In order to see distinctly what the peculiarities of mere animal expression are, it seems proper to reduce the muscles of expression in animals to their classes. These muscles, as they appear in the several quadrupeds, may be distinguished into, 1. Those which raise the lips from the teeth; 2. Those which surround the eyelids; and 3. Those which move the nostril.

1. The first of these classes, viz. the muscles which raise the lips from the teeth, admit of a subdivision. In the carnivorous animal the muscles of the lips are so directed as to raise the lip from the canine teeth. In the graminivorous they are so directed as to raise the lips from the incisores. The former I would take the liberty of distinguishing by the name of Ringentes, snarling muscles; the latter by the name of Depascentes.

The snarling muscles take their origin from the margin of the orbit of the eye, and from the upper jaw, they are inserted into that part of the upper lip from which the whiskers grow, and which is opposite to the canine teeth. Their sole office is to raise the upper lip from the canine teeth, and although they are assisted in this office by other muscles, (the masticating and zygomatic muscles) I have ventured to distinguish them particularly as the muscles of snarling. This action of snarling is quite peculiar to the ferocious and carnivorous animals. The graminivorous are incapable of it, and these muscles consequently are to be found only in the former class, not in the latter. In the carnivorous animals there is no perfect or regular orbicular muscle, as in man, for contracting the lips. The lips hang loose and relaxed, unless when drawn aside by the snarling muscles, and they fall back into this state of relaxation, with the remission of the action of these muscles.

The muscles of the lips, which in carnivorous animals are directed to the side of the mouth, are in graminivorous animals directed to the middle of the lip over the Incisores. I have given to these the name of Depascentes, from their use and destination in enabling the animal to open its lips, so as to gather its food, and to bite the grass. They are long muscles; one set comes down upon the side of the face, and joining in a broad tendon, passes over the nose to be inserted into the upper lip. Another set runs along the lower jaw, to be inserted by a peculiar feathered tendon into the under lip. The horse has these muscles very strong. In

the stallion they give a very characteristic and peculiar expression, when he snuffs the breeze, with his head high in air. When he bites, the expression is entirely different from that of the carnivorous animal. Instead of exposing the teeth, corresponding with the canine, he lifts the lips from the fore teeth, and protrudes them. The carnivorous animals have not these muscles of the fore part of the lip. In them the lips over the incisores are not fleshy like those of the graminivorous animals, but they are tied down to the gums, and the fore teeth are uncovered only in consequence of the straining occasioned by retraction of the side of the mouth.

Although the graminivorous animals have not those muscles of the lips, which so powerfully draw back the lips in the carnivorous class, they have a more perfect orbicular muscle surrounding the mouth, and regulating the motion of their fleshy lips.

2. Muscles which surround the eyelid. In man, the upper eyelid is raised by a muscle coming from the bottom of the orbit. But besides this muscle, animals of prey, in whom there is that peculiar and ferocious splendour of the eye, which we distinguish in the tiger or the lion, have in addition three muscles attached to the eyelids, which drawing the eyelids backward upon the peculiarly prominent eyeball, produce the fixed straining of the eye, and by stretching the coats, give a greater brilliancy to the reflection. These muscles may be classed under the term Scintillantes, because by retracting the eyelids, they expose the brilliant white

of the eye, which reflects a sparkling light. In the sheep, there is only a web of fibres to raise the eyelid. In the horse, there is a muscle to pull down the lower eyelid, and one passing from the ear to the outer angle of the eyelid, to retract it, and enable the animal to direct the pupil backward where his defence lies. In the feline tribe there is a reflection of light from the bottom of the eye when the pupil is dilated; and as the pupil is dilated in obscure light, there is a brilliant reflection from the cat's eye, which we mistake for indication of passion. All these may be partially displayed in the human eye, as the bloodshot redness in combination with the circle of reflected light from the margin of the cornea, like a flame or angry spark, as Charon is described by Dante,

> " Che' intorno agli occhi avea di fiamme ruote,"

Or as lighted charcoal, from the bottom of the eye,

> " Caron demonio con occhi di bragia."

It is in this way that a touch of true expression will illuminate a whole passage; so Milton,

> " With head uplift above the wave, and eyes
> *That sparkling blaz'd.*" *

3. The muscles of the nostril are not less distinct and peculiar in different classes of animals than those of the eye and lips. In the carnivorous animals the nose is comparatively insignificant, pro-

* So also Spenser, B. vi. cant. 7, stanza 42.

vision being made in the open mouth for any occasional increase of respiration above the uniform play of the lungs; while in the inoffensive animals, the prey of the more ferocious, the inflation of the nostril is provided for by the action of a peculiar set of muscles.

For example, in the horse "the glory of whose nostrils is terrible," the muscles which inflate the nostril are very peculiar. They arise like the Ringentes of the carnivorous animals; but instead of being fixed into the lips, as in carnivorous animals, whose lips are to be raised from the canine teeth, they pass to the nostrils, and in combination with some lesser muscles powerfully inflate them when the animal is pushed to his speed, or excited by fear, or inflamed to rage. In the sheep, though the nostril seems to have a very limited power of expansion, and the animal is soon run down, yet the muscles of the nostril are particularly strong when compared with those of a dog, which has only a small muscle for those quick motions of the nostril, which we may observe while the animal is smelling. In the fear and panting of a sheep, the motion of the nostril is perhaps the only trait of expression.

When we turn our attention to the muscles of the human countenance, we perceive, that while the motions of the lips and nostrils have not the same extensive range as in the several classes of animals, there is combined in the face of man a capacity for all the

variety of expressions which distinguish the several kinds of whose nature he partakes. He stands, as it were, between the carnivorous and graminivorous animals, or rather, it were more correct to say, that he partakes of the nature of both. He has the snarling muscles which we have observed so peculiarly to distinguish the carnivorous animals, while he is able to protrude the lips, and uncover the incisores. In the carnivorous animals we have seen, that while the muscles that descend from the bones of the cheek and upper jaw to raise the lips are very strong, the orbicular, or circular fibres of the lips are very imperfect, the lip being tied down at the fore part to the gums. In the graminivorous animals, on the contrary, the orbicular muscle is nearly perfect, while the elevating and depressing muscles of the side of the mouth are deficient. But in man, both those classes of muscles are combined; the elevating and depressing muscles are perfect, while the orbicular muscle completely antagonizes them, modulating and qualifying their actions, and bestowing the utmost perfection on the motion of the lips.

Whether we look to the form of the features, or to their capacities of expression, the consideration of the two classes of muscles, as pointed out in the carnivorous and graminivorous brutes, will illustrate some peculiarities. The excitement of passion will in one man be indicated chiefly by the prevalence of one class of muscles, and in another individual the other class will predominate and give expression. In the Kemble cast of features there is a capacity of high excitement; but in that family there never appeared the

bloodthirsty expression which Cooke could throw into his face. In the latter the Ringentes prevailed: and what determined hate he could express, when, combined with the oblique cast of his eyes, he drew up the outer part of the upper lip, and disclosed a sharp angular tooth! And is it not this lateral drawing of the lips, and stretching them upon the closed teeth, that makes the blood start from them in remorseless hate and rancour? But in the cast of Mrs. Siddons's countenance there is a capacity of noble sentiment—it blazed in expression on the discovery of fraud and villany. There, as in her brother John, the animation is in the mobility of the nostril and the swelling of the upper lip, and a mouth capable of expressing whatever is most exalted in human sentiment.

But besides the muscles analogous to those of brutes, there is an intertexture of muscles in the human countenance, which evinces a provision for expression quite independent of the original destination of those muscles that are common to man and animals. There are muscles not only peculiar to the human countenance, but which act where it is impossible to conceive any other object for their exertion than that of expressing feeling and sentiment. These muscles indicate emotions, and sympathies, of which the lower animals are not susceptible; and as they are peculiar to the human face, they may be considered as the index of mental energy in opposition to mere animal expression.

The parts of the human face the most moveable and the most

expressive are the inner extremity of the eyebrow, and the angle of the mouth, and these are precisely the parts of the face which in brutes have least expression; for the brutes have no eyebrows, and no power of elevating or depressing the angle of the mouth. It is in these features therefore that we should expect to find the muscles of expression peculiar to man.

1. The most remarkable muscle of the human face is the corrugator supercilii. It arises from the frontal bone, near the union with the nasal bones, and is inserted into the skin of the eyebrow. It knits the eyebrows with a peculiar and energetic meaning, which unaccountably, but irresistibly, conveys the idea of mind and sentiment.

The anterior portion of the occipito-frontalis muscle is the antagonist of the orbicular muscle of the eyelid. It is wanting in the animals we have already examined, and in its stead, fibres more or less strong are found to be directly inserted into the eyelids*.

The motion of the features, which, next to that produced by the corrugator supercilii, is the most expressive of human sensibility and passion, is at the angle of the mouth; and at one time I had conceived, that the muscle which is called the superbus,

* The expanded muscle of the skull in brutes is reflected off to the ear.

and which elevates and protrudes the under lip, was peculiar to man; but I was deceived. The character of human expression is in the triangularis oris, or depressor anguli oris, a muscle which I have not found in any other animal; which I believe to be peculiar to the human face, and for which I have been able to assign no other use than what belongs to an organ of expression. It arises from the base of the lower jaw, and passes up to be inserted with the converging fibres of almost all the muscles of the side of the face at the corner of the mouth. It produces that arching of the lip so expressive of contempt, hatred, jealousy; and in combination with the elevator of the under lip, and the orbicularis, it has a larger share than any other muscle in the infinite variety of motion in the mouth, expressive of sentiment.

When we compare the muscles of the human head with those of animals, we may perceive many smaller distinctions, into a detail of which I shall not at present enter. The Depressor Alæ Nasi; the Nasalis Labii Superiores; the descending fibres of the Occipito-Frontalis, are not in the brute; and in general the more minute and fasciculated structure of all the muscles of the lips, in the face of man, indicates a decided superiority in the provision for the motion of the features.

We have already observed, that the chief expression of which the faces of animals seem capable, are those of rage and of fear.

Even pain is very obscurely indicated, except in the voice, and in the writhing and struggling of the body.

Rage is expressed most strongly by the carnivorous animals: in them it is wild, ferocious, and terrifying. In the milder class of animals the chief expression is such as may be called Tonic; the effect of the excited state of the body. The rage of the carnivorous animal, so far as it appears in the expression of the face, is found in the strong action of the ringentes or snarling muscles, the exposure of the canine teeth, the gnashing of the tusks, and the brilliant state of excitement of the eye. The rage of the graminivorous is chiefly to be found in the eye, and in the inflation of the nostril. The expression of human rage participates of both these; the corresponding muscles of the lips and nostril, producing a similar action with that of animals; an exposure and gnashing of the teeth; a degree of sparkling of the eye, and an inflation of the nostril. And of a face under the influence of such action, a spectator would infallibly say, that the aspect is perfectly brutal, savage, and cruel. But when the corrugator supercilii, a muscle peculiar to human expression, is brought into action, the sign is altered. The eyebrows are knit, the energy of mind is apparent, and the mingling of human thought and emotion with the savage and brutal rage of the mere animal.

In man, the action of the frontal muscle, and corrugator supercilii, and of the orbicular muscle of the mouth, bestows a great

latitude of expression. If, in addition to the action of these muscles, and instead of the wide drawn lips, and the exposure of the teeth, as in the rage or bodily pain of animals, the mouth is half closed, the lips inflated by the action of the circular fibres, and drawn down by the action of the peculiarly human muscle the depressor anguli oris, there is then more of agony of mind than of mere bodily suffering; a combination of muscular actions of which animals are incapable.

The action of the orbicular muscle of the lips is indeed the most characteristic of agony of mind, and of all those passions which partake of sentiment: in grief, in vexation of spirit, in weeping, it modifies the action of the muscles of animal expression into human character.

Fear seems to be characterised in animals chiefly by a tonic effect on the body; by something like a mingling of anger, and a preparation for defence, with the shrinking of alarm in the more ferocious animals: and a straining of the eye and inflated nostril, with trembling in the milder. In human fear and suspicion, the nostril is inflated, and the eye has that backward, jealous, and timid character which we find in the horse, and in all the class of milder animals.

The orbicular muscle of the lips, with the complete system of elevating and depressing muscles which is found in man, lead to

expressions peculiarly human. And here I may observe, that expression is not always the effect of an universal tension of the muscles of the face, nor directly of the action of individual muscles. It sometimes is the effect of mere relaxation; and of this, smiling and laughter furnish the most apposite examples. The capacity of receiving ludicrous ideas is as completely denied to animals as they are utterly incapable of the accompanying action of laughter. Dogs, in their expression of fondness, have a slight eversion of the lips, and grin and snuff amidst their frolic and gambols, in a way nearly resembling laughter; but there is truly nothing in all this which approaches to human expression. That expression is produced by the relaxation of the orbicular muscle of the lips, and the consequent preponderance of the elevating muscles; and of course the expression of laughter can exist only in a face which possesses both the orbicular and the straight muscles of the lips in perfection.

In the human emotions of contempt, pride, suspicion, and jealousy, the orbicular muscle of the lips, and the triangularis oris, produce by their combination the arching of the lips, and the depression of the angle of the mouth. The bitter horizontal drawing of the lips which just discloses the teeth, and betrays the several malignant passions, is owing to a more general action of the muscles overcoming the opposition of the orbicularis.

In grief, the muscles of the eyebrow and those of the lips are

combined in expression; hence the union of that upward direction of the extremity of the eyebrow which characterises peevishness, discontent, and sinking of the spirits, with the depression of the angle of the mouth, so distinctly indicative of the harassed and subdued state of the mind.

By the combination of those grosser features of expression, many of the lesser traits, and much of that various play of the features expressive of human passions are produced in joy, hope, admiration, anxiety, fear, horror, despair; and thus while the human countenance is capable both of the rage of the more ferocious animals, and of the timid expression of the milder, it possesses powers of expression almost to infinity, by the combined action of a few superadded and peculiar muscles.

It is curious to observe how the muscles, by producing distinct expression, afford a new occasion of distinguishing the tribes of animals: and how as signs of superior intelligence, they become proofs of the higher endowments of man, and a demonstration of the peculiar frame and excellence of his nature.

As the inquiry in which I have been engaged has reference to painting, and the representation of emotion, I may be allowed, while thus considering the peculiarities of human expression, to add, that the imposing effect of a fine head in painting, and in sculpture, depends upon the artist preserving the perfection of human character.

The expression of the whole head, and of the individual features, must be strictly and peculiarly human to be grand or imposing. And although the form of the brute-head is often highly beautiful, yet when transferred to the human, it is incongruous and incompatible; it produces unpleasing associations, and degrades the character as being inconsistent with the expression of that intellect which must always form part of the idea communicated by human physiognomy. So it is also with individual features, and with their motions or expressions. Wherever the imagination catches an idea of brutal character in the eye, nose, lips, teeth, or ears, by reminding us of animal expression, it is found to be incompatible with human beauty.

The character of the human head has reference chiefly to the structure of the bones; a subject which is treated of in another essay. But there is at least one part of the character of human beauty, of which we may here take notice, namely, that which is founded on the capacity for expression.

This capacity for expression, this indication of a mind susceptible of great, or of tender emotions, has a great share in human beauty; whether in the living countenance, or as we see it in sculpture or in painting. Even when unexercised and in the calmest scenes of life, that capacity of energy and exertion which indicates a great mind susceptible of emotion, strikes the spectator with more admiration than the finest inanimate form of features. How fas-

cinating when compared with the insipid prettiness of an inanimate beauty is that susceptibility which occasionally lightens up the countenance and plays upon the features of a woman of sensibility, even while she is unmoved by any particular affection!

The full clear eye; the arched and moveable eyebrow; the smooth and polished forehead; as indicating this kind of capacity, this susceptibility of emotion, and power of expression, are grand features of human character and beauty. And the perfection of their beauty is found whenever the spectator is made sensible of this inherent, this latent power of expression, even while no prevailing passion gives a cast to the features. But a great portion of the beauty of the human face is in the nose and the mouth; in a nostril which has the full capacity for expression, without being too membraneous and inflatable, for that produces a mean and imbecile kind of fierceness; and in lips at once fleshy and apparently mobile and capable of that various modulation of form which is necessary to speech and the indication of human emotion.

The French naturalists made a great mistake when they concluded that the nose and mouth belonged to our inferior nature. They are the organs of the noblest and most distinguishing faculties of our nature, speech and expression. Those features are perfect, and become features of great beauty when they are developed and capable of language and expression in contradistinction to the mere office of eating or smelling.

OF LAUGHTER.

Let us begin our observations on the play of the features by observing the character of broad laughter; for if we cannot comprehend or explain what takes place in this extreme of expression we shall in vain attempt the rationale of the more refined and gentler emotions as exhibited in the countenance. In laughing it is in vain that we attempt to confine or purse the lips: a complete relaxation of the orbicular muscle of the mouth gives an uncontrolled power to the opponent muscles, to those which concentrate

to the angle of the mouth and the upper lip. Hence the lateral drawing of the lips, the elevation of the upper lip disclosing the teeth, the very peculiar elevation of the nostrils without their being expanded (for we breathe only through the mouth in laughing); hence too the dimple in the cheek, where the acting muscles congregate; and hence the fulness of the cheek, rising so as to conceal the eye and throw wrinkles about the lower eyelids and the temples, whilst the skin of the chin is drawn tight by the retraction of the cheeks and the opening of the jaws. Thus it is obvious that the whole moveable features are raised upwards. The orbicular muscles of the eyelids do not partake of the relaxation of the mouth; they are excited so as to contract the eyelids and sink the eye, whilst the struggle of a voluntary effort of the muscles to open the eyelids and raise the eyebrow gives a twinkle to the eye and a peculiar obliquity to the eyebrow, the outer part of it being most elevated.

I have stated that it is the nerve I call respiratory which produces all this extended influence upon the features, and that with the loss of the power of that nerve there is a total extinction of this expression. We have a confirmation of this in witnessing the further influence of the passion in agitating the whole extent of the respiratory nerves and muscles. He holds his sides to control the contractions of the muscles of the ribs. The diaphragm is violently shaken. The same influence spreads to the throat, and

the sound of laughter is as distinct and peculiar as the signs in the face.

Defining laughter according to the anatomy, it is a certain influence of the respiratory nerve of the face, which produces relaxation of the orbicular muscle of the lip, whilst it excites the class of ringentes, and the orbicular muscles of the eyelids into action. In what then does it differ from its opposite, the expression of pain or crying?

CRYING.

I have thrown the expression of weeping, from pain, into the face of a fawn: for there is in weeping something inexpressibly mean and ludicrous when it appears in the countenance of a man.

In the violence of weeping, accompanied with lamentation and outcry, the face is flushed, or rather, I may say, suffused with stagnant blood, and the veins of the forehead are distended. In this we see that the emotion from the beginning affects the muscles of respiration, and confines the motion of the lungs, and that the return of the blood from the head is somewhat impeded. The muscles of the cheeks are in action, as in the former instances; but the influence is now more general. Those which depress the lips and angle of the mouth partake of equal if not more powerful excitement with the ringentes, and the orbicularis muscle of the mouth is not relaxed but drawn open by the prevailing action of its opponents. There is a convulsive action in the muscles about the eyes; the brow is drawn down; the eyes compressed by the eyelids; the cheek raised; the nostril drawn out, and the mouth stretched laterally.

In weeping also, unless the convulsive action of the muscles be very strong, the general expression of grief affects that part of the eyebrows which is next the nose. It is turned up with a peevish expression, and this will correspond with the depression of the corners of the mouth.

In the former edition of this essay I said, if ever we should possess a perfect knowledge of the nerves, it would enable us to comprehend the meaning of that pungent sensation in the nose that precedes the flow of tears, and which is so distinctly described by Homer as influencing Ulysses when he sees his father pour the dust upon his reverend head. The translators do not seem to have understood the truth and full effect of the picture. Odyss. B. 24. Now we know that a branch of the respiratory system of nerves can be traced into the nose: it is this nerve which, being irritated, causes sneezing, which is a convulsion of the respiratory muscles, so directed in their actions as to rid the membrane of the offending body by directing the stream and volume of air by the nostrils instead of the mouth. It is the same nerve, which, feeling the impression in weeping (an impression from a condition of the mind), contracts the motions of the muscles of the face into the expression of weeping; and which, if it prevail powerfully, will at length draw the whole respiratory apparatus of the chest, neck, and face into convulsions.

It will be observed that in laughter, as in crying, in the two extremes of character, the whole apparatus of respiration is early and remarkably affected; a further proof, if any is wanting, of what is delivered in the former essay.

In the next place it is evident, that no theory of tension or relaxation of the muscles generally will explain the effects of either

of these extreme emotions on the face. There is an action of certain muscles both in laughter and in weeping. Nor can we account for actions so peculiar and so distinctly marked, by supposing them concomitant or accidental to certain voluntary motions which the passion suggests.

The depressing of the angle of the mouth gives an air of despondence and languor to the countenance when accompanied with

a general relaxation of the features, or, in other words, of the muscles. When the corrugator which knits the brows co-operates with it, there is mingled in the expression something of mental energy of moroseness or pain. If the frontal muscle joins its operation, an acute turn upwards is given to the inner part of the eyebrow, very different from the effect of the general action of the frontal muscle, and decidedly characteristic of an aguish debilitating pain, or of discontent, according to the prevailing cast of the rest of the countenance.

But a very limited observation will teach us, that while languor and despondency are indicated by depression of the angle of the mouth, the depression must be slight, not violent: for the DEPRESSOR ANGULI ORIS (N.) cannot act strongly without the combination of a muscle, viz. the SUPERBUS, which quickly produces a revolution in the expression, and makes the nether lip pout contemptuously.

In sorrow general languor pervades the whole countenance. The violence and tension of grief, the agitations, the restlessness, the lamentations, and the tumult, have, like all strong excitements, gradually exhausted the frame. Sadness and regret, with depression of spirits and fond recollections, have succeeded; and lassitude of the whole body, with dejection of face and heaviness of the eyes, are the most striking characteristics. The lips are relaxed and the lower jaw drops; the upper eyelid falls down and

half covers the pupil of the eye. The eye is frequently filled with tears, and the eyebrows take an inclination similar to that which the depressor of the angles of the lips give to the mouth *.

I am not quite sure that in the grief of Constance there is not an unnatural mixture of the tumult and violence of grief with the contemplative recollections of sorrow. Her impatience and turbulence, which make her tear her hair, defy all counsel and redress, and call on death or madness as her sole relief, seem ill assorted with that calmness of spirit which can stop to recollect and enumerate in detail the figure and endearing manners of her son.

Grief fills the room up of my absent child,
Lies in his bed, walks up and down with me;
Puts on his pretty looks, repeats his words,
Remembers me of all his gracious parts,
Stuffs out his vacant garments with his form:
Then have I reason to be fond of grief.
Fare you well! had you had such a loss as I,
I could give better comfort than you do.
I will not keep this form upon my head [*tearing off her head clothes.*]
When there is such disorder in my wit.
O Lord, my boy, my Arthur, my fair son!
My life, my joy, my food, my all the world!
My widow's comfort, and my sorrow's cure!

This appears to me rather to be the stage of the passion which is properly called sorrow; the indulgence of which is attended

* Some have been so far deceived by the effect of this raising of the eyebrows towards the centre of the forehead as to give the same oblique line to the eyes; but the canthus or angle of the eye is fixed immoveably, and no working of passion can alter it.

with a melancholy delight, and which can sanction the conclusion, "Then have I reason to be fond of grief." Yet as conviction returns at intervals upon the mind, a period of quiet and sorrowful resignation is succeeded by starts and violent bursts of grief.

Though grief is in general distinguished by its violence, lamentation, and tumult, while sorrow is silent, deep brooding, and full of depression, there is a stupefaction which sometimes characterises grief, "the lethargy of woe."

Upon the whole, we are brought to the conclusion, that the expressions of the passions are constituting a language of natural signs, a means of communication, and a source of sympathy betwixt all mankind.

Drawn by Charles Bell. Engraved by Edwd Scriven.

Proof

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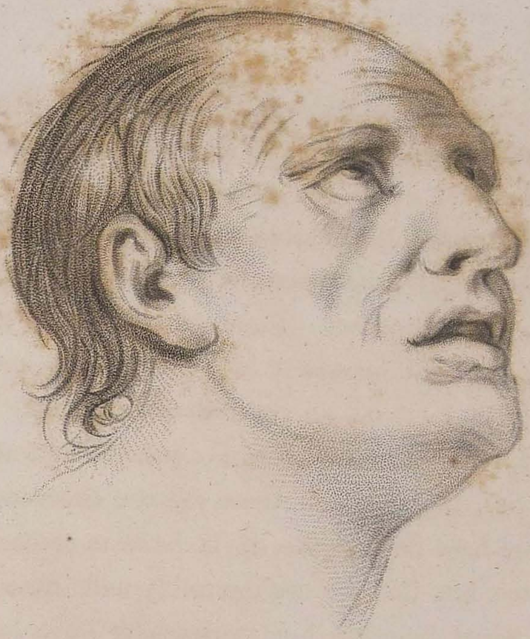
ESSAY V.



ESSAY V.

IN WHICH THE SUBJECT OF EXPRESSION IS FURTHER PROSECUTED.

The further we proceed in this inquiry, the subject becomes more difficult, and presents innumerable delicacies; and in what remains I shall not pretend to much regularity, but rather indulge in some detached remarks, keeping, I hope, true to the observation of nature, and as indifferent as possible to theory.

N

We shall consider the whole features which are acted upon by emotion, and are expressive of intelligence, as forming the countenance. This definition embraces the forehead, that smooth table, on which principally the emotions, while they last, are written in most expressive characters. Some would persuade us that the fine forehead is beautiful because it indicates the size and perfection of the brain; but I should, on the contrary, say, and I am certain I have the prevailing sentiment of the peasant and the philosopher in my favour, that we look there for the expression of emotion, and that we have no thoughts of the brain in contemplating a fine countenance, but that we are insensibly and irresistibly drawn to love that which indicates human character in its loveliest moods. Under the smooth skin of the forehead lie muscles which move with every passing thought. It is lovely to see it serene, because we admire the unruffled mind; so do we admire the placid sea, because it is indicative of the softness of the breeze, and the safety of those who trust to it; but when we love it quiet we know that the storm may rise to convert its beauty into darkness and terror: so in the face, we value it not as a mere fixed form of beauty, which may remain like a bust before us, but as the varying index of the mind. The forehead, the eyebrow, and the eyes constitute by far the fairest and most expressive part of the human countenance, and there we must look for the indications of pleasure, for whatever human sympathy the heart most longs for. The forehead is important to the human face, not because we have conviction of its form being the indication of the size of the brain, and therefore of the degree

of intellect; but because it is an index of the thoughts and emotions, and is a particular and appropriate organ of expression.

We have already had occasion to remark, that the expression which is peculiarly human affects chiefly the angle of the mouth and the inner extremity of the eyebrow. And it is to these points that we have principally to attend in all our observations concerning the expression of passion. These are the most moveable parts of the face: to these points the muscles are concentrated; and it is upon the changes which they undergo, that expression is acknowledged chiefly to depend.

To demonstrate how important these points of the features are, we have only to make that experiment which Peter of Cortona made before Francis the First of France; to sketch a placid countenance, and touch lightly with the pencil the angle of the lips and the inner extremity of the eyebrows. By elevating or depressing these, we shall quickly convey the expression of grief or of laughter.

These parts, however, and all the features of an impassioned countenance, have an accordance with each other. When the angles of the mouth are depressed in grief, the eyebrows are not elevated at the outer angles, as in laughter. When a smile plays around the mouth, or the cheek is elevated in laughter, the brows are not ruffled as in grief. The characters of such opposite passions

are so distinct, that they cannot be combined where there is true and genuine emotion. When we see them united by those who have a ludicrous control over their muscles, the expression is farcical and ridiculous.

In the features of an impassioned countenance there is a consent and accordance of expression. It is not upon a single feature that the emotion operates; but the whole face is marked with expression, all the movements of which are consentaneous. This is referable to some cause operating generally on the tone and state of the frame, the particular expression of individual emotion being distinguished by the action and determination of particular features.

Taking indifference as the line of distinction between the two great classes of pain and pleasure, the class of sensations above this line are weak compared with those below. The simple sensations of pleasure, before they are heightened and diversified by the multiplied associations of mental affection, are soft and gentle in their nature. The class of painful sensations is very different in character: they are powerful and overwhelming; they are meant as our guardians and protectors against danger and death, and operate with resistless force. The pleasurable sensations induce a languor and delight, and partake of the quality of indulgence and relaxation; the painful excite to the most violent tension, and make all the muscular frame start into convulsive action.

The emotions and passions, grounded originally on these great classes of sensation, raised and increased by the mingling of hopes and fears, and the combinations of analogous and associated images of delight or of danger, take their great constitutional traits of expression from the general tone of pleasure or of pain.

In pain, the body is exerted to violent tension, and all the emotions and passions which are allied to pain, or have their origin and foundation in painful sensations, have distinctly this character in common, that there is tension, or a start into exertion, or tremor, the effect of universal and great excitement. It must at the same time be recollected, that all the passions of this class, some more immediately, others more indirectly, produce in the second stage a loss of tone, exhaustion, and debility, from over exertion.

On the other hand, as pleasure is characterized by languor, soft tranquillity, and relaxation from bodily exertion, all the emotions related to it, or deducible from pleasurable sensations, are characterized by the prevailing state of the system; by a degree of inaction, and as it were forgetfulness of bodily exertion; and an indulgence in mental contemplation. The contemplation of beauty, or the admiration of soft music, produces a sense of languor; the body reclines; the lips are half opened; the eyes have a softened lustre from the falling of the eyelids; the breathing is slow; and from the absolute neglect of bodily sensation, and the temporary interruption of respiration, there is a frequent low drawn sigh.

PAIN, ANGUISH, AND DEATH.

Pain first rouses the faculties both of the body and of the mind, and from a dormant state gives us consciousness and real existence. It is bestowed upon us as a perpetual guard, forcing us to watch continually for the safety of the body and the preservation of life. From the expression of pain as a centre we may trace the indications of many of the mixed passions.

In bodily pain the jaws are fixed and the teeth grind; the lips are drawn laterally, so as to expose the teeth and gums; the nostrils are distended to the utmost, and at the same time drawn up; the eyes are largely uncovered, and the eyebrows elevated; the face is turgid with blood, and the veins of the forehead and temples distended, the breath being suspended, and the descent of the blood from the head impeded. Much of the expression results from the strong action of the muscles closing the jaws, and the strong action and consequent stringiness of the cutaneous muscles of the neck R, plate II., which at the same time draws down the corner of the mouth.

In anguish mingling with bodily suffering the character approaches near to this of the marginal plate: the jaw falls; the tongue is seen, and instead of the lateral retraction of the lips, the lower lip falls; the eyebrows are knit, while their inner extremities are elevated; the pupils of the eyes are in part concealed by the upper eyelids, and the nostrils are agitated. The agony of mind is now added to the bodily suffering, which is most particularly indicated by the change on the eyebrow and forehead.

In the marginal plate we have a man forcibly subdued in all his strength. The brows are more violently knit, (which I conceive indicate somewhat of rage and hatred unsubdued), and they are less elevated towards the centre of the forehead; the nostril is inflated; the mouth open, but not stretched wide: it is as if in

a deep sonorous bellowing, and the whole face is quivering with action.

In the UTMOST EXTREMITY OF PAIN there are yet other distinctions to be marked. In agony we may frequently perceive convulsive motions in the cheeks and lips, and in the throat, which render all the little muscles particularly distinct: a violent tension is upon the whole face, and the painter is constrained to mark the anatomy strongly.

The mingling of despair and rage and bodily pain is a very difficult study for the painter. But he must be able to express these mingled emotions; else how shall he represent the varieties of death which the historical painter must exhibit? In this marginal plate I have sketched the idea of a man who has received a mortal blow, but who is infuriated like a beast.

Some wounds subdue at once the energies of the mind and body: others shake the whole frame and countenance with horrible convulsions.

The whole muscles are here exerted to the utmost, and the strongest having the preponderance give the character. The muscles which shut the jaw are stronger than those which open it; the jaw is therefore strongly clinched. We see that the muscles of the throat too (which are also those by which the jaw is drawn

down) are in action, and the convulsion of these muscles is to be particularly marked. The nostril is inflated and drawn up, the lips are open, and the angle is nearly drawn into a circle by the simultaneous action of the following muscles in Plate II. Levatores Labiorum (f. g.), Zigomatici (h.), Buccinator (g. Pl. III.), Triangularis Oris (n.), and Platysma Myoides (r.) The eyebrows are strongly knit, and the eyeballs as if starting from their sockets.

If a man be shot, there will be no such ferocious expression; there is then often a strange and inexplicable nervous effect, a trembling and sinking of the body, with faintness and oppression; the face and body cold, pale, and livid.

We cannot fail to observe how artfully the poets suit their descriptions of death to that kind of interest in the person which they have laboured to excite; and this a judicious painter will not neglect. The tyrant falls convulsed and distorted in painful agony; the hero, in whose fate the reader has been made to sympathise, expires without the horrors of death; his fall is described with all the images of gentle declension, where mortal languor is succeeded by insensibility, unaccompanied by pangs and struggles.

In the Episode of Nisus and Euryalus, Virgil gives to the death of Sulmo all the horror of violent death, the præcordia is convulsively drawn, and the sides palpitate.

——————— hasta volans noctis diverberat umbras,
Et venit adversi in tergum Sulmonis, ibique
Frangitûr, ac fisso transit præcordia ligno.
Volvitur ille, vomens calidum de pectore flumen,
Frigidus, et longis singultibus ilia pulsat.
Æneid ix. 411.

But in painting the death of Euryalus, the poet recurs to all the images of languid and gentle decline:

Volvitur Euryalus letho, pulchrosque per artus
It cruor, inque humeros cervix collapsa recumbit,
Purpureus veluti cum flos succisus aratro,
Languescit moriens; lassove papavera collo
Demisere caput, pluvia cum forte gravantur*.
Æneid ix. 433 †.

* Tasso presents us with some very fine contrasts of the same kind; in painting the death of Argante, for example, he gives a picture of ferocious and savage impetuosity and strength.

Infuriossi allor Tancredi et disse;
Cosi abusi, fellon, la pietà mia?
Poi la spada gli fisse et gli refisse
Nella visiera, ove accertò la via.
Moriva Argante, e tal moría qual visse:
Minacciava morendo, e non languia;
Superbi, formidabili, e feroci
Gli ultimi moti fûr, l'ultime voci.
Tasso, Ger. Lib. Cant. xix. 26.

In the death of Dardinel, the simile of Virgil is beautifully imitated by Ariosto:

Come purpureo fior languendo muore
Che'l vomere al passar tagliato lassa
O come carco di soverchio umore

It will indeed often be necessary to represent death unaccompanied with the horror by which natural representation must generally be distinguished. We not unfrequently see a young creature in death, as if asleep, with the beauty of countenance unobscured by convulsion; the form alone remains, the animation is gone, and the colours of life give place to the livid tints of death.*

D' un bel pallore ha il bianco volto asperso,
Come a' gigli sarian miste viole.
. . . .
. . . . . . In questa forma
Passa la bella donna, e par che dorma.
Ger. Lib. di Tasso, Cant. xii. 69.

Again the same poet:

E, quasi un ciel notturno, anco sereno
Senza splendor la faccia scolorita.

A man who has died in battle lies blanched and very pale; he bleeds to death. But one strangled or cut off by violence in civil

Il papaver ne l' horto il capo abbassa
Cosi giu de la faccia ogni colore
Cadendo Dardinel di vita passa, &c.

As a further contrast we might take the death of the Soldan's page: Ger. Lib. ix. 86.

† So of Nisus throwing himself upon the body of his friend, Æneid ix. 444. Contrast also the death of Eumenius, ib. xi. 664, with that of Acca, and that of Camilla, in the same book.

broil, amidst his efforts, has the blood settled in his face. The following picture is truly horrible from its truth and accuracy:

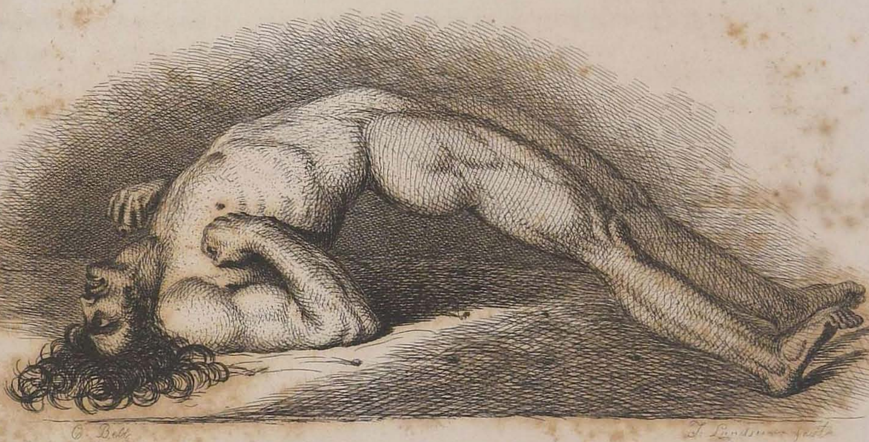
> But, see, his face is black, and full of blood;
> His eyeballs further out than when he lived,
> Staring full ghastly like a strangled man:
> His hair uprear'd, his nostrils stretch'd with struggling;
> His hands abroad display'd as one that grasp'd
> And tugg'd for life, and was by strength subdued.
> Look on the sheets; his hair, you see, is sticking;
> His well proportion'd beard made rough and rugged,
> Like to the summer's corn by tempest lodged.
> It cannot be, but he was murder'd here;
> The least of all these signs were probable.
>
> King Henry VI. Part II.

The laws of inquest in this country require us to witness such things in all their horrible circumstance, since the body lies where it falls, and no weapon or even disorder of dress is removed. "The blood is black and stiff, in strong contrast with the paleness of the face. Yet there is some colour in the face, it is pale yellow, stained with light blue and purple on the temple, eyelids, and sides of the nose. The eyes are closed, but why so different from sleep? a nearer inspection shows that in the agony the under eyelids are drawn under the upper ones. The jaws are clenched, and the tongue caught betwixt the teeth." This young man had put a pistol to his head.

Are such scenes to be represented? Certainly not. But they are to be conceived by those, who consistently with good taste, are,

in a manner less obtrusive and circumstantial, to convey an impression to the spectator, to that mind which may be awakened to sensation without all the disgusting circumstances of the actual scene. We may have it in words, as Shakspeare has represented the body of the good Duke Humphry. But in painting, the material makes the representation too true to admit the whole features of horror.

I throw in this sketch to remind the painter that in *convulsion*, although there may appear to him an accidental and deranged action of the muscular frame, there is no such thing in nature. It is a disease he is representing, which has definable symptoms, and it will ever present itself with the same characters.



In vain will the study of history, of mythology, or of a purer religion enrich his imagination, and present him with subjects for his art, if science and philosophy do not join, to enable him to give a representation true to nature. If Ananias is to be represented dying convulsed, let it be according to the unerring principles of our nature. The evening on which I sketched this figure from recollection, I had, in the course of the day, seen three men in succession, die in this state, with an exact resemblance in every twist and contortion of the frame; nor should I have caught the expression unless I had observed that all the muscular frame was affected, and that the most powerful flexor muscles dragged their opponents. Men in this condition are insensible to present objects, and their mutterings prove them to have the idea still prevailing in their minds of opposing the enemy*.

* These are painful subjects to present to the reader. It may be a relief to his mind to know, that when there is this terrible excess of expression, there is, notwithstanding, insensibility to pain. One young gentleman, on recovering from the convulsions caused by a gun-shot fracture of the skull, declared that he was insensible to suffering, and the struggles, which to his companions in arms appeared so appalling, were to him merely the exertions which he thought necessary to preserve his balance on a soft bed, upon which he imagined himself to be stretched and carried high in air.

In Fear there are several degrees. In simple bodily fear there is mere animal expression, great meanness, and almost total absence of mind and energy. Mr. Burke, in his speculations on fear, assimilates it, with perhaps too little discrimination, to pain. "A man in great pain," he observes, "has his teeth set; his eye-brows are violently contracted; his forehead is wrinkled; his eyes are dragged inwards, and rolled with great vehemence; his hair

stands on end; his voice is forced out in short shrieks and groans; and the whole fabric totters."—"Fear or terror," he continues, "which is an apprehension of pain or death, exhibits exactly the same effects, approaching in violence to those just mentioned, in proportion to the nearness of the cause, and the weakness of the subject*."

But there is one distinguishing feature of the two conditions—The immediate effect of pain is to produce an energetic action and tension of the whole frame; that of fear is to relax all the energy of mind and body, to paralyse as it were every muscle. Mr. Burke seems to have written loosely, partly from forgetting that pain and fear are frequently combined, and partly from taking a view of the subject too much limited to the particular conclusion which he wished to enforce. There cannot be great pain without its being attended with the distraction of doubts and fears; the dread even of death is a natural consequence of extreme pain, and so the expression of fear in the countenance, is frequently mingled with that of pain. But perhaps there are few passions which may not, in consequence of such combinations, be assimilated with equal truth—fear and hatred; hatred and rage; rage and vengeance and remorse. On the other hand, confining the assimilation with pain to the case of simple bodily fear, there is much truth in the observation of this eloquent writer. The fear of boiling water falling on the legs, gives an expression of the anticipation of scalding, resembling the

* Sublime and Beautiful, part iv. § 3. Cause of Pain and Fear.

meaner expression of bodily pain and suffering. As Mr. Burke says, fear in a dog will no doubt be that of the lash, and he will yelp and howl as if he actually felt the blows. This indeed is the only kind of fear which brutes know. The higher degrees of fear, in which the mind operates, and which we shall see characterised in the countenance by an expression peculiar to mental energy, do not appear in them.

In man, the expression of mere bodily fear, is like that of animals, without dignity; it is the mean anticipation of pain. The eyeball is largely uncovered, the eyes staring, and the eyebrows elevated to the utmost stretch. There is a spasmodic affection of the diaphragm and muscles of the chest, affecting the breathing, producing a gasping in the throat with an inflation of the nostril, convulsive opening of the mouth, and dropping of the jaw; the lips nearly concealing the teeth, yet allowing the tongue to be seen, the space between the nostril and lip being full. There is a hollowness and convulsive motion of the cheeks, and a trembling of the lips, and muscles on the side of the neck. The lungs are kept distended, while the breathing is short and rapid. From the connexion of the nerves of the lungs and midriff with those of the side of the neck, and with the branches which supply the cutaneous muscle of the cheek and neck, we may comprehend the cause of the convulsive motion of this muscle*. The aspect is pale and cadaverous from the receding of the blood. The hair is lifted up by the creeping of the skin.

* See a preceding Essay.

In the sketch at the head of this chapter I have endeavoured to express fear mingled with wonder. But if we should suppose the fear there represented, to have arisen from apprehended danger still remote, and that the object of fear approaches, the person trembles and looks pale; a cold sweat is on his face; he apprehends that it is now about to cleave to him, and in proportion as there is less room for the imagination to range in, as the danger is more distinctly visible, the expression partakes more of actual bodily pain. The scream of fear is heard, the eyes start forward, the lips are drawn wide, the hands are clenched, and the expression becomes more strictly animal, and indicative of such fear as is common to brutes.

I should give the name of TERROR to that kind of fear in which the mind takes part, in which there is a strong working of the imagination with greater energy, a more varying expression in the features, and an action of those muscles which are peculiar to man, and which seem to indicate his superior intelligence and mental feeling. The steps are hurried and unequal, the eye is bewildered, the inner extremity of the eyebrows is turned up and strongly knit by the action of the corrugator and orbicular muscles, (B. C. C. plate II.) and distracting thoughts, anxiety, and alarm, are strongly indicated by this expression, which does not belong to animals. The cheek is a little elevated, and all the muscles which concentrate about the mouth are in action. There is a kind of modulating action in the circular muscle of the lip; the lips are inflated, the mouth less open. The cutaneous muscle, the platysma myoides (R. plate II.), has a strong effect on the angle of the mouth and the lower angle of the cheek and neck; it is strongly contracted, and its strong fibres may be seen starting into action like cords under the skin. The imagination wanders; there is an indecision in the action, the steps are furtive and unequal, there is a spasm which hinders speech, and the colour of the cheeks vanishes.

> Canst thou quake and change thy colour,
> Murther thy breath in middle of a word,
> And then again begin, and stop again,
> As if thou wast distraught and mad with terror?

HORROR differs both from fear and from terror, though more nearly allied to the last than to the first. It is superior to both in

this, that it is less selfish, less imbued with alarm, and is more sympathetic, having in contemplation the feelings of others, rather than a strict and immediate relation to our own individual suffering. We are struck with horror even at the spectacle of artificial distress, but it is peculiarly excited by the danger or actual suffering of others. We see a child under a waggon wheel, and in danger of being crushed by the enormous weight, with sensations of extreme horror. Horror is full of energy; the body is in the utmost tension, not unmanned as with fear. A sensation of cold seems to chill the blood; the term is applicable "damp horror;" the flesh creeps, and we feel that peculiar sensation which gives its name to the emotion.

In this sketch I have endeavoured to convey what I have witnessed in those seized with hydrophobia. It was not taken from the patient, but is rather the impression left on my mind after visiting a patient under this greatest possible calamity. It is the extreme expression of horror.

Terror, when mingled with astonishment, is fixed and mute. The fugitive and unnerved steps of mere terror, are changed for the rooted and motionless figure of a creature appalled and stupified. Spenser characterises well this kind of terror:

> He answer'd nought at all: but adding new
> Fear to his first amazement, staring wide
> With stony eyes and heartless hollow hue,
> Astonish'd stood, as one that had espied
> Infernal furies with their chains untied,
> And trembling every joint did inly quake,
> And falt'ring tongue at last these words seem'd forth to shake.
>
> Fairy Queen.

Despair is a mingled emotion. While terror is in some measure the balancing and distraction of a mind occupied with a possibility of danger, despair is the total wreck of hope, the terrible assurance of ruin having closed around, beyond all power of escape. The expression of despair must vary with the nature of the distress of which it forms the acmê. In certain circumstances it will assume a bewildered distracted air, as if madness were likely to afford the only relief from mental agony. Sometimes there is at once a wildness in the looks and total relaxation, as if falling into insensibility;

or there is upon the countenance of the desperate man a horrid gloom; the eye is fixed, yet he neither sees nor hears aught, nor is sensible of what surrounds him. The features are shrunk, pale and livid, and convulsion and tremors affect the muscles of the face. Hogarth has chosen well the scene of his picture of despair. In a gaming house, the wreck of all hope, affects in a thousand various ways, the victims of this vice; but in all pictures of despair an inconsolable and total abandonment of those exertions to which hope inspirits and excites a man, forms an essential feature. We have two fine pictures of despair painted in detail by English poets. One is by Spenser, in Book I. cant. 9, st. 35, of the Fairy Queen.

The darksome cave they enter, where they find
That cursed man low sitting on the ground,
Musing full sadly in his sullen mind;
His griesly locks long growen and unbound,
Disorder'd hung about his shoulders round
And hid his face; through which his hollow eyne
Look deadly dull, and stared as astound;
His rawbone cheeks, through penury and pine,
Were shrunk into his jaws, as he did never dine.

The other picture of despair is in the tragedy of the Gamester, where Beverley, after the most heart-rending reiteration of hope and disappointment, having staked the last resource and final hope of his wife and family on one fatal throw, finds himself suddenly plunged into inevitable ruin.

"When all was lost, he fixed his eyes upon the ground, and

stood sometime with folded arms stupid and motionless: then snatching his sword that hung against the wainscot, he sat him down, and with a look of fixed attention drew figures on the floor. At last he started up; looked wild and trembled; and, like a woman seized with her sex's fits, laughed out aloud, while the tears trickled down his face. So he left the room."

A painter may have to represent terror, despair, astonishment, and supernatural awe, mingled in one powerful expression of emotion. In a mind racked with deep despair, conscious of strength and courage, but withered and subdued by supernatural agency, the expression is quite removed from all meanness; it must be preserved grand and terrific; the hero may still appear, though palpitating and drained of vigour.

Milton has admirably sketched the nerveless stupefaction of mingled astonishment and horror.

On th' other side Adam, soon as he heard
The fatal trespass done by Eve, amaz'd,
Astonied stood and blank! while horror chill
Ran through his veins, and all his joints relax'd.
From his slack hand the garland wreathed for Eve
Down dropp'd, and all the faded roses shed;
Speechless he stood and pale! till thus at length
First to himself he inward silence broke.

B. ix. ver. 888.

ADMIRATION, JOY, SUSPICION, REVENGE, REMORSE.

In ADMIRATION the faculty of sight is enjoyed to the utmost, and all else is forgotten. The brow is expanded and unruffled, the eyebrow gently raised, the eyelid lifted so as to expose the coloured circle of the eye, while the lower part of the face is relaxed in a gentle smile. The mouth is open, the jaw a little fallen, and by the relaxation of the lower lip we just perceive the edge of the lower teeth and the tongue. The posture of the body is most expressive when it seems arrested in some familiar action.

JOY is distinguishable from pleasure. It consists, not so much in the sense of gratification, as in the delight occasioned by the conviction that the long expected pleasure is within our reach, and by the lively anticipation of the enjoyment which is now decked out and adorned in its most favourite and alluring shape. A certain sensation of want is mingled with joy; a recollection of the alternate hopes and fears which formerly distracted the mind, as contrasted with the immediate assurance of gratification.

In joy the eyebrow is raised moderately, but without any angularity; the forehead is smooth; the eye full, lively, and sparkling; the nostril is moderately inflated, and a smile is on the lips. In all the exhilarating emotions, the eyebrow, the eyelids, the nostril,

and the angle of the mouth are raised. In the depressing passions it is the reverse. For example, in discontent the brow is clouded, the nose peculiarly arched, and the angle of the mouth drawn down very remarkably.

I have here given a sketch of the testy, pettish, peevish countenance bred of melancholy; one who is incapable of receiving satisfaction from whatever source it may be offered; he cannot endure any man to look steadily upon him, or even speak to him, or laugh, or jest, or be familiar, or hem, or point, without thinking himself contemned, insulted, or neglected.

This arching of the mouth and peculiar form of the wings of the nose are produced by the conjoint action of the triangular muscle which depresses the angles of the mouth (N. Plate II.) and the SUPERBUS, whose individual action protrudes the lower lip.

The very peevish turn given to the eyebrows, this acute upward inflection of their inner extremity, and the meeting of the perpendicular and transverse furrows in the middle of the forehead, are produced by the opposed action of the middle part of the frontal muscle, (OCCIPITO FRONTALIS A.) and the corrugator muscle (B.)

Habitual Suspicion and Jealousy are symptoms and accompaniments of melancholy. Envy may be classed with these expressions. But it is an ungenerous repining, not a momentary passion *.

* It consumes a man as a moth does a garment to be a living anatomy, a skeleton, to be a lean and pale carcass quickened with the fiend, " *intabescetque videndo.*"

" La' invidia, crudelissimo dolore di animo, per il bene altrui; fa ritirar tutti i membri, come contraere, & offuscar le ciglia, stringere i denti, ritirar' le labbra torcersi con certa passione di sguardo quasi in atto di volere intendere & spiare i fatti altrui," &c.—Lomazz. p. 130.

Suspicion is characterised by earnest attention, with a certain timorous obliquity of the eyes. Spenser characterises suspicion as being

——— foul, ill-favour'd, and grim,
Under his eyebrows looking still askance,
And ever as Dissemblance laught on him,
Lowring on her with dangerous eye glance,
Showing his nature in his countenance.
His rolling eyes did never rest in place,
But walkt each where for fear of hid mischance,
Holding a lattice still before his face,
Through which he still did peep as forward he did pass.

Jealousy is marked by a more frowning and dark obliquity of the eyes, as if he said, "I have an eye of you:" with the lowering eyebrow there is combined a cruel expression of the lower part of the face.

Jealousy is a fitful and unsteady passion: much of its character is in the rapid vicissitudes from love to hate; now absent, moody, and distressed; now courting love; now ferocious and revengeful—it is therefore difficult to represent it in painting. In poetry only can it truly be presented in the vivid colours of nature; and even of poets, Shakspeare alone seems to have been equal to the task. Sometimes it may be personified in the countenance of a mean, pitiful, suspicious, yet oppressed creature: or again in a bold lowering countenance, the body as if shrunk into itself like one brooding over his state, and piecing out a tissue of trifling incidents to abuse his judgment.

In jealousy the eyelid is fully lifted, and the eyebrows strongly knit, so that the eyelid almost entirely disappears, and the eyeball glares from under the bushy eyebrow. There is a general tension on the muscles which concentrate round the mouth, and the lips are drawn so as to show the teeth with an expression of cruelty, depending in a great measure, perhaps, on the turn of the nostril, which accompanies the drawing of the lips. The mouth should express that bitter anguish which the Italian poet has rather too distinctly told:

> Triema 'l cor dentro e trieman fuor le labbia
> Non puo la lingua disnodar parola,
> La *bocca amara* e par che tosco v' habbia.

Again:

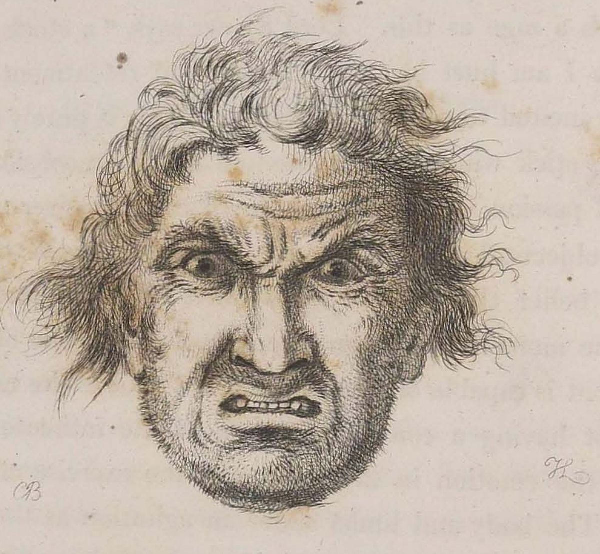
> E per l' ossa un tremor freddo gli scorre,
> Con cor trafitto, e con pallida faccia
> E con voce tremante, e *bocca amara.*

There seems to be a natural succession in Rage, Revenge, and Remorse. I do not mean morally, but with a view to our present inquiry concerning the traits of expression. A slight change on the lineaments of rage gives the expression of revenge, while the cruel eye of revenge is tempered by the relaxing energy of the lower part of the countenance in remorse.

Rage is that excess or vehemence of anger that can be no longer restrained; whether the object be near or remote, the frame is

wrought and chafed. It is a brutal passion, in which the body suffers without the impetuosity being directed by sense. If we observe it in a beast, we shall better recognise it in man. When the keeper strikes the tiger or the wolf with his pole, we see excited an instantaneous fire of expression; the eye, the teeth are in a moment exposed, and accompanied with an activity of the frame and a state of preparation which we cannot see unmoved. If the human brute were to strangle helpless age or infancy, it would be with such a rage as this. Lord Kames says, " a stock or a stone by which I am hurt becomes an object of resentment, and I am violently incited to crush it to atoms." This is purely as the wolf bites the stick which is presented to him. In considering those bursts of passion which lead us to wreak our vengeance upon inanimate objects, Dr. Reid supposes we are possessed with the momentary belief that the object is alive: "there must," he says, " be some momentary notion or conception that the object of our resentment is capable of punishment." I believe the mistake here is, in not having a confirmed notion of the intimate connexion betwixt the emotion in the mind and the exercise of the bodily frame. The body and limbs suffer an agitation as the face does, resulting from the passion; and if a man, half conscious of the phrensy which possesses him, and fearful of being betrayed into an act of cruelty, flings from him the weapon of destruction, it is with the jerk and impetuosity of an outrageous act; whilst his humane sense controls him, it is not capable of arresting that instinctive

agency of the body wrought upon by the passion; just as a man, after long exercise of patience in some work of delicacy or nicety, is at last overcome, dashes the instrument from him, and relieves himself by a burst of impatience and some angry strides.



In rage the features are unsteady, the eyeballs are seen largely; they roll and are inflamed. The front is alternately knit and raised in furrows by the motion of the eyebrows, the nostrils are inflated to the utmost; the lips are swelled, and being drawn, open the corners of the mouth.

The action of the muscles is strongly marked. The whole visage is sometimes pale, sometimes inflated, dark, and almost livid; the words are delivered strongly through the fixed teeth; "the hair is fixed on end like one distracted, and every joint should seem to curse and ban*."

Tasso thus describes the rage of Argante:

> Tacque; e 'l Pagano al sofferir poco uso,
> Morde le labbra†, e di furor si strugge.
> Risponder vuol, ma 'l suono esce confuso,
> Siccome strido d' animal, che rugge:

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* La furia, fa gl' atti stolti, et fuor di se; si comme di quelli che si avvolgono ne i moti offensivi, senza riguardo alcuno, rendendosi vehementi in tutti gl' affetti, con bocca aperta, et storta, che par che stridano ringhino urlino et si lamentino, stracciandosi le membra et i panni et facendo altre smanie.—Lomazzo, lib. II. p. 135.

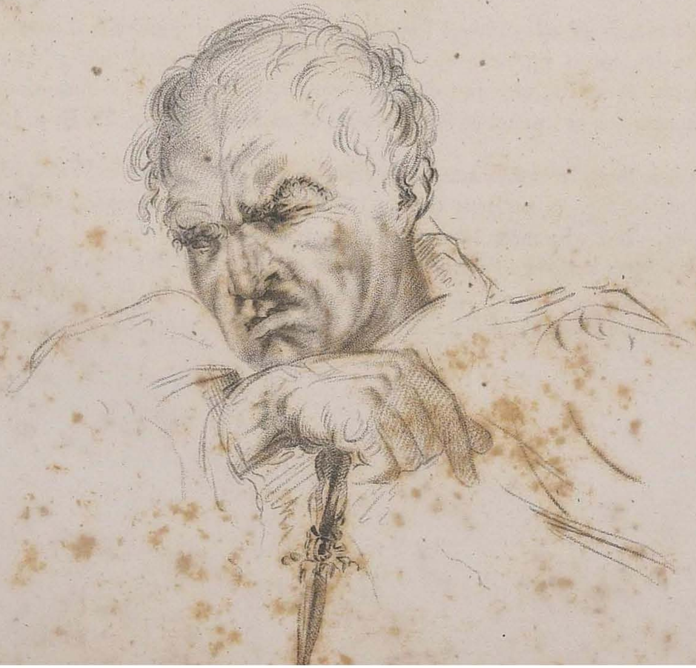
† As it is thought rather a mean expression in the statue of David with his sling, that he bites his lip, so perhaps the poet should avoid an expression which has so little dignity. But why mean? because not true to nature.

If the painter has any imagination and power of delineation, the reading of the whole passage, being the combat of Tancred and Argante, must inspire him with the grandest conception of the sublime ferocity of the human figure in action.

O 'come apre le nubi, ond' egli è chiuso
Impetuoso il fulmine, e sen fugge;
Così pareva a forza ogni suo detto,
Tuonando uscir dall' infiammato petto.
Cant. vi. 38.

But the passion may be much varied in the representation: perhaps the eyes are fixed upon the ground; the countenance pale, troubled, and threatening; the lip trembles, and the breath is suppressed, or there is a deep and long inspiration as of inward pain.

In the following sketch I have endeavoured to represent those feelings which succeed the last horrid act of revenge: the storm has subsided, but the gloom is not yet dissipated. Some compunctious visitings of nature are in the lips, though the eye retains its severity. By the posture and the fixed attention I would indicate, that the survey of the now lifeless body carries back the train of thought with less severe judgment of past transactions.



If I were to set down what ought to be represented as the prevailing character and physiognomy of a madman, I should say, that his body should be strong, and his muscles rigid and distinct; his skin bound; his features sharp; his eye sunk; his colour a dark brownish yellow, tinctured with sallowness, without one spot

of enlivening carnation; his hair sooty black, stiff, and bushy. Or perhaps he might be represented as of a pale sickly yellow, with wiry red hair.

> His burning eyen, whom bloody streaks did stain,
> Stared full wide, and threw forth sparks of fire,
> And more for rank dispight than for great pain
> Shakt his long locks, colour'd like copper wire,
> And bit his tawny beard to show his raging ire.

I do not mean here to trace the progress of the diseases of the mind, but merely to throw out some hints respecting the character of the outrageous maniac.

You see him lying in his cell regardless of every thing, with a death-like fixed gloom upon his countenance. When I say it is a death-like gloom, I mean a heaviness of the features without knitting of the brows or action of the muscles.

If you watch him in his paroxysm you may see the blood working to his head; his face acquires a darker red; he becomes restless; then rising from his couch he paces his cell and tugs his chains. Now his inflamed eye is fixed upon you, and his features lighten up into an inexpressible wildness and ferocity.

The error into which a painter would naturally fall, is to represent this expression by the swelling features of passion and the frowning eyebrow; but this would only convey the idea of passion,

not of madness. Or he mistakes melancholia for madness. The theory upon which we are to proceed in attempting to convey this peculiar expression of ferocity amidst the utter wreck of the intellect, I conceive to be this, that the expression of mental energy should be avoided, and consequently all exertion of those muscles which are peculiarly indicative of sentiment. I conceive this to be consistent with nature, because I have observed (contrary to my expectation) that there was not that energy, that knitting of the brows, that indignant brooding and thoughtfulness in the face of madmen which is generally imagined to characterise their expression, and which we almost uniformly find given to them in painting. There is a vacancy in their laugh, and a want of meaning in their ferociousness.

To learn the character of the human countenance when devoid of expression, and reduced to the state of brutality, we must have recourse to the lower animals; and as I have already hinted, study their expression, their timidity, their watchfulness, their state of excitement, and their ferociousness. If we should transfer their expression to the human countenance, we should, as I conceive it, irresistibly convey the idea of madness, vacancy of mind, and mere animal passion.

But these discussions are only for the studies of the painter. The subject should be full in his mind, without its being for a

moment imagined that such humiliating or disgusting details are suited to the canvas. If he has to represent madness, it is with a moral to show the consequences of vice and the indulgence of passion.

There are, however, subjects allied to this, which belong both to sacred and to classical painting—"And when the unclean spirit had torn him, and cried with a loud voice, he came out of him"—"And when the devil had thrown him in the midst, he came out of him."—By what aids is the painter to represent this demoniac phrensy; is it by the mere violence and extravagance of convulsion, or shall it be a creation from a mind learned as well as inventive?

There is a link of connexion betwixt all liberal professions. The painter should sometimes borrow from the physician. If he has to represent a priestess or sibyl, he will require something more than his imagination can supply; he will readily conceive that the figure is full of energy, the imagination at the moment exalted and pregnant, and the expression bold and poetical—so that things long past are painted in colours as if they stood before her. But he will have a more precise and true idea of what is to be depicted, if he reads the history of that *melancholia* which undoubtedly in early times has given the idea of one possessed with a spirit. A young woman is constitutionally pale and languid, and from this inanimate state, no show of affection or entreaty will draw her into

conversation with her family. But how changed is her condition when the blood mounts into her cheeks, and the eyes are dry and sparkling, the whole figure animated, and the voice possessed of new force, and with a tone so greatly altered that even a parent declares she does not know her child. How natural is then the belief that a spirit has entered into the inanimate body, and that this force of imagination and of language is not hers. The transition is easy; the priests assume the care of her, watch her ravings and give them meaning, until she is exhausted and sinks again into a death-like stupor or indifference.

Successive attacks of this kind indelibly impress the countenance. The painter has to represent features powerful, but consistent with the maturity and perfection of feminine beauty. His genius will be evinced, in his bestowing upon the countenance that deep tone of interest which belongs to features inactive but not lost to feeling. In the dead and uniform paleness of the face he will show something of that imprint of deep and long suffering without human sympathy—throw around her the appropriate mantle—let the fine hair descend on her shoulders—and the picture will not require golden letters to announce her character, as we see in old paintings of the Sibyl.

Drawn by Charles Bell.

Engraved by Freeman.

I have here introduced a sketch of hydrophobia, chiefly to show the respiratory organs in their utmost excess of expression. A delirium attends the latter hours of the patient, but the disease does not correspond to the term canine madness; it is an affection of the nerves of breathing and expression. The disease influences these nerves almost exclusively, and when the paroxysm returns, it is with a sense of suffocation, attended with a sudden convulsive heaving of the chest, catching of the muscles of breathing, and an inexpressible degree of agony in the countenance—horror and shuddering.

I have thus put down a few hints on a most unpleasant and distressing subject of contemplation. But it is only when the enthusiasm of an artist is strong enough to counteract his repugnance to scenes in themselves unpleasant, when he is careful to seek all occasions of storing his mind with images of human passion and suffering, when he philosophically studies the mind and affections as well as the body and features of man, that he can truly deserve the name of a painter.

ESSAY VI.

ESSAY VI.

OF EXPRESSION IN REFERENCE TO THE BODY. EXPRESSION SUPERSEDED BY LANGUAGE.

In the preceding essays, the greater number of the instances of expression, indicate to us, that the apparatus of respiration is the instrument by which the emotions are manifested. The powerful passions influence the same class of nerves, and consequently of muscles, that are active in highly excited or anxious breathing. In fear or in grief, the motions of the nostrils, the uncontrollable tremor of the lips, the distress and convulsion of the neck and chest, and the audible sobbing, prove that the mind's influence is extended over the respiratory organs, so that there is not much difference betwixt the action of the frame during the violence of the passions and the agony of a drowning man.

But having traced the connexion betwixt the excitement of the breast or trunk of the body and the expression of the countenance, we may direct our attention for a moment to the consent which is

established betwixt the breathing, and the state or expression of the body generally, and the position of the extremities. It will not, I hope, be objected to me that I take the same instances which I have formerly used to illustrate the universal consent of the animal frame. When the tiger or wolf are struck and excited by their keeper, and roused suddenly to the utmost activity and ferocity, the character is seen not only in the glare of their eyes, and the retraction of their lips, and the harsh sound of the breath, as it is sent forcibly through the confined throat, but every muscle of the body is in tension, all the limbs are in an attitude, and in a state of strained exertion, prepared to spring upon you.

In this condition of high animal excitement observe the manner in which the chest is kept distended and raised. The drawing in of the breath is rapid, the expiration slow, and the instant that the keeper strikes the jaw there is not only a start into exertion, but the breath is at the same instant rapidly inhaled.

The cause of this is readily understood when we know that the muscles have two extremities; one fixed, which is called their *origin*, the other moveable, which is called their *insertion*. The muscles of the arms, or of the fore legs of brutes, have their origins on the chest. To give power to the further extremities or insertions of these muscles, the chest must be fixed; and to give them their fullest power, the chest must be expanded and raised as well as fixed. Hence it is that the most terrible silence of all, is when

the outcry of terror or pain is stifled in exertion; for during the struggle with the arms, the chest must be fixed or in the act of rising, and therefore the voice, which consists in the expulsion of the breath by the falling or compression of the chest, is suppressed, and the muscles which perform the office of raising and distending the chest, act in aid of the muscles of the arms. The moment of alarm is also that of flight or defence; the sudden and startled exertion of the hands and arms is attended with a sudden inspiration and spasm of the mouth and throat, and the first sound of fear is in drawing, not in expelling the breath, for at that instant to depress and contract the chest would be to relax the muscles of the arms and enfeeble their exertion. Such combinations of the muscular actions of the frame are not left to the direction of our will, but are provided for in the original constitution of the animal body: they are instinctive motions. Yet, the principles of criticism in these matters have been laid down with surprising confidence by persons who have no knowledge of anatomy, and whose curiosity has never been raised, during the experience of a long life, to the phenomena of their own emotions, or what they must have witnessed in others.

I shall transcribe here a passage from an elegant and ingenious critic, on which I shall freely make some remarks.

" In like manner, it is not with the agonies of a man writhing in the pangs of death, that we sympathize, on beholding the cele-

brated groupe of Laocoon and his sons; for such sympathies can only be painful and disgusting; but it is with the energy and fortitude of mind, which those agonies call into action and display: for though every feature and every muscle is convulsed, and every nerve contracted, yet the breast is expanded and the throat compressed, to show that he suffers in silence. I therefore still maintain, in spite of the blind and indiscriminate admiration, which pedantry always shows for every thing which bears the stamp of high authority, that Virgil has debased the character, and robbed it of all its sublimity and grandeur of expression by making Laocoon *roar like a bull;* and I think that I may safely affirm that, if any writer of tragedy were to make any one personage of his drama to roar out in the same manner, on being mortally wounded, the whole audience would burst into laughter, how pathetic soever the incidents might be that accompanied it. Homer has been so sensible of this, that of the vast number and variety of deaths, which he has described, he has never made a single Greek cry out on receiving a mortal wound*."

The criticism here is just, so far as the artist is praised and the poet blamed; but the critic has mistaken the ground of the praise and blame. I regret to see these subjects treated after this manner. It appears strange that gentlemen should philosophize on such points, and yet should keep themselves ignorant of the most com-

* Mr. Payne Knight on Taste, p. 333.

mon things in the structure of their own frame, and the most essential to just criticism in works of art. What ideas can be conveyed, for example, by such expressions as the contraction of a feature, of a muscle, and of a nerve?

The beauty of this group of the Laocoon arises from its being a true transcript of natural expression, and all perfection of the kind that outlasts the vicissitudes of taste will be found thus true to nature. The artist has conveyed the impression to the critic which he has to every body besides, that Laocoon suffers in silence, that there is no outcry indicated; but it is not because the throat is compressed that we discover it, but by this, that the chest is now straining to give power to the muscles of the arms, while in the parted lips there is evidence that no breath escapes, or at most a low and hollow groan. He could not roar like a bull, he could not push his breath, in the very moment of powerful exertion with his arms, to untwist the serpent which is coiled around him. It is a mistaken notion to suppose that this suppressed voice and this consent of features with the exertion of the frame, proceed from an effort of the mind to sustain his pain in dignified silence; for this condition of the arms, chest, and face are necessary parts of one action. Neither is the critic correct in supposing it possible that a man struck down with a mortal wound, and rolling in the dust like Homer's ill-fated heroes, should roar out like a bull. A mortal wound is immediate in its influence on these vital parts

and respiratory organs, and the attempt to cry aloud would end in a feeble wail or groan. There is no danger that the tragedian who follows nature shall wound the good sense of an audience by actual outcry and bellowing. But these critics think it necessary to refine and go beyond nature, whereas the great rule is to learn her ways, and to be cautious of adding the slightest trait of expression, or what we conceive to be such, to the simple, and because simple, the powerful character of natural action; for, instead of making the appeal more powerful to the senses, it is sure to weaken it.

In the statue of David with his sling, there is an attempt at expression which offends good taste, because it is out of nature. The artist, intending to convey the idea of resolution and energy, has made him bite his lip. This is not true to nature. Biting of the lip is a motion intended to restrain expression, to suppress some angry emotion which is rising in the breast; and if it be admitted at all, even in a caricature, it must be as indicative of *pruritus*, or some trifling inconvenience, and never of heroism. It is inconsistent with that vigorous tone which should pervade the whole frame. This vigour cannot otherwise be represented than in the excitement of the breast, lips, and nostrils, while the posture and the eyes give a direction and a meaning to the animation of the frame. All this is destroyed by an expression so weak and inconsistent as biting the lips. It is a vulgar expression, not

because it is common, but because it is a trick not true to nature.

As a further illustration of this subject view the dying gladiator. He is not resting, he is not falling; but in the position of one wounded in the chest, and seeking relief from that anxious and oppressed breathing that attends a mortal wound with loss of blood. He seeks support to his arms, not to rest them or to sustain the body, but to fix them, so that the muscles of the arms may become muscles of the chest, and thus assist the labouring respiration. This is the attitude to which the nature of his sufferings leads.

So a man afflicted with asthma rests his hands or his elbows upon a table, stooping forward; that the shoulders becoming fixed points, the muscles of the arm and shoulder may act as muscles of respira-

tion, and aid in the difficult motion of the chest during that heaving and anxiety which belong to the disease.

When a man is mortally wounded, and still more, if he be bleeding to death as the gladiator is, he presents the appearance of suffocation; for the want is felt in the breast, and relief is sought in the heaving of the chest. If he have at that moment the sympathy and aid of a friend, he will cling to him, half raising himself and twisting his chest with the utmost exertion; and while every muscle of the trunk stands out abrupt and prominent, the muscles of the neck and throat, and nostrils and mouth, will partake of the excitement. In this condition he will remain fixed, and then fall exhausted with the exertion; it is then, in the moment of the chest sinking, that the voice of suffering may be heard. If he has fallen on the turf, it is not the pain such as we have experienced, but that indescribable agony of want and call for instinctive exertion which has lodged and torn the grass around the lifeless body.

But let us take a less appalling instance of the consent of the frame with the functions of the heart and lungs. In this connexion between the muscles of the chest and arms we see how a little man, oppressed by obesity, should add to the vulgarity of his appearance in speaking, by his abrupt gesticulation. His emphatic words are forced out in barking tones, accompanied with little jerks

and twists of the arms, the reverse of grace; while in a taller and ungainly person an awkwardness of an opposite kind is exhibited, in a more disjointed swing of the arms during the efforts of his elocution.

Expression is to passion what language is to reason. Without words to represent ideas, by which they are capable of arrangement and comparison, the reasoning faculties could not be fully exercised; and it does not appear that there could be excess or violence of passion in the mind merely, and independent of the action of the body.

The expression of pain in the infant is not only perfect, but is in extreme degree. From the beginning, in the first moment of birth and through life, from the entrance to the final exit of the man, the features will express pain exactly in the same manner. To say the least, the instrument is prepared to express the state of the infant mind, and does express it in the instant of its visiting the world. The act of respiration itself is not so readily accomplished by the infant, as that combination of muscles which expresses pain.

Are we not authorised to say, that the bodily frame is subject

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to passion, is instinctive and perfect in its operations at the commencement of life? and if the expression does not precede the act of the mind, it undoubtedly accompanies its first effort, gives it a direction, and adds force to it. The bodily frame, though secondary and inferior, comes in aid of the mind, and developes its faculties by the operation of the instruments of expression, as much as by the organs of the senses.

The smile that dimples an infant's cheek, and which in after years corresponds with pleasurable and complex ideas, can have no such origin. This expression is not first seen when the infant is awake, but oftener while it is asleep; and this first beam of pleasure to a mother's eyes is met with the cold observation of the wise old women, that it is an internal convulsion which produces it. They conclude that the child's intellects are not yet matured to correspond with the expression, and attribute the effect to some internal irritations. This expression is that spontaneous operation and classification of the muscles which wait for the development of the faculties to accompany them closely when they do arise, and in a great measure to control them during life. It may be too much to affirm, that without the co-operation of these organs of the frame, the mind would remain a blank; but surely it must owe much to its connexion with an operation of the features which is perfected before it, and which is unerring in its exercise from the very commencement.

The expression of pain in an infant is extraordinary in force and caricature; the expression of laughter is pure in the highest possible degree, as indicating unalloyed pleasure, and will relax by sympathy even the iron features of a stranger. Here the rudiments of expression ought to be studied, for in after life they cease to have the pure and simple source which they have in infancy; the feelings are composed and restrained, the mind is in a state of more compound feeling, and the unmixed characters of passion are to be seen only in unpremeditated bursts of great vehemence. How much influence the instrument of expression has in first rousing the mind into that state of activity which we call the passions or emotions, we may learn from the power which the body has at all times to control these passions. "I have often observed," says Burke, "that on mimicking the looks and gestures of angry or placid, or frightened or daring men, I have involuntarily found my mind turned to that passion whose appearance I endeavoured to imitate."

Whether it be possible to mould the body, and thus to steal into another's thoughts, I know not; but it is of more consequence to recollect that we may in this way ascertain our own; by the actions and expressions of the body betraying the passions of our hearts, we may be startled and forewarned, as it were, by the reflection of ourselves, and at the same time learn to control our passions by restraining the expression of them. Coarseness of

manners leaves the worst tendencies of our nature unchecked; politeness, on the other hand, must go far to produce a real gentleness of disposition; while sycophancy and the too submissive bearing of the body must produce meanness, and add servility to duplicity.

As we hold our breath and throw ourselves into an opposite action to restrain the ludicrous idea which would cause us to break out in rude laughter, so may we restrain other rising emotions, by checking the expression of them; and by composing the body, we put a rein upon our very thoughts. The powers of language are so great, and minister in so superior a manner to reason and the higher faculties of the mind, that the language of expression, which was so necessary to develope these powers, is in a manner superseded; good taste and good manners retain it in a sort of abeyance. We esteem and honour that man most who subdues the passions which directly refer to himself, and cultivates those which have their source in benevolence—who resists his own gratification, and enters warmly by sympathy into what others feel—who despises direct pleasures, and cultivates those enjoyments which he participates with others. Whatever is morally just is beautiful in art: the expression of pain, proceeding from the direct suffering of the body, is disgusting, while that which animates to the highest degree of expression in compassion or sympathy with another's sufferings, cannot be too powerfully pourtrayed, if it be done truly.

In studying expression the artist should attempt all, even that which is disagreeable, so that in higher composition he may avoid deformity and all debasing expressions, and this not by chance, but by knowing them and avoiding them. By this means, and it was that of the ancients, his powers of representation will be improved, and what is dignified and beautiful in form and expression more certainly attained.

ESSAY VII.

ESSAY VII.

OF BEAUTY IN THE HUMAN FACE, AS IT REGARDS THE PERMANENT FORMS, IN CONTRADISTINCTION TO EXPRESSION.

To connect the subject of the beauty of the human countenance with anatomy must be acknowledged a matter of some difficulty. Much has been written on the sources of beauty; the utmost perfection of language, adorned by classical allusions, and the imagery of rich and cultivated fancy, have made these essays valuable; yet I cannot help thinking that there has been an inattention to the philosophy or truth of the subject.

On the other hand, writers of my own profession have been misled, by what I must call a very superficial survey of the head of man and of brutes; and they have permitted themselves to be confined in the trammels of a false theory.

It has been assumed, I think without due examination, that if we compare the area of the cranium with the area of the face, the

proportions will vary with the degree in which the intellectual perfections are enjoyed—that the size of the brain case, in reference to the size of the bones of the face, will serve as a measure of the capacity of the mind.

It has been presumed also, that as the cranium contains the higher or more important organ, and the bones of the face relate to the inferior senses, the perfection and beauty of form will be greatest when the excess is on the part of the former.

It appears that this notion has been first entertained on looking to the Negro's head; and on observing the retreating line of the forehead, a conclusion has been hastily drawn, that the area of the bones of the face bear a larger proportion to the size of the head than in the European. A comparison betwixt the skulls of man and of brutes has served to support this theory. But in the very groundwork there is an error; and it will be found insufficient to explain the nature of that perfection which we call beautiful, and which is equally observable in each part, in the individual features as well as in the proportions of the head generally.

METHODS HITHERTO EMPLOYED IN MEASURING THE PROPORTIONS OF THE SKULL.

In the sketches of Albert Durer we may find the rudiments of that method of measuring the head which was employed by Camper and others*.

In these outlines of his, we see the course of his cogitations on the subject of the antique and the negro countenance. Nor can we fail to observe how easy the transition was from these to the illustrations of the facial line by Camper.

But whilst this ingenious author and painter made such sketches, as seem to anticipate the system of the Dutch professor, I am bound to show that he had more just conceptions of his subject, and has gone far to destroy the originality of my own theory, and that which I had thought I was the first to express. He says,

"Questa certo è cosa certissima, che coloro, che intenderanno la Brutezza, e deformita facilmente intendera, che cosa egli deve schivare nell' opera incominciata per bellezza, e quanto alcuno

* See the subjoined plate of outlines of the head.

più si discostera dalla brutezza, tanto più si avvicinera alla bellezza."—Lib. iii. — 84.

The facial line of Camper is proposed as a measurement of the relative size and perfection of the head and face. It is a line drawn from the prominence of the forehead to the most projecting part of the upper jaw at the sockets of the cutting teeth*. This method may assist the draughtsman, but it is not philosophically correct. To measure the perpendicular line there must be a horizontal line, and that which Camper has taken is subject to variation; and the inclination of this line will depend more on the prominence of the upper jaw and frontal sinuses than on the general form of the head, or the distinctive peculiarities of the bones of the face and cranium. Accordingly, it is found that the skulls of different nations, and of individuals of the same nation, agree in the facial line, while there are marked distinctions in the forms of the cranium and face, in the air and character of the whole head, as well as the particular features.

The *linea occipitalis* was a line used by Daubenton for the purpose of measuring the differences of the crania of man and brutes. One line was drawn from the posterior margin of the occipital foramen to the inferior margin of the orbit; another horizontally

* See Plate II. fig. 4 and 5.

through the condyles of the occipital bone. These two lines embraced the jawbones, and their angle was the measure of the comparative size of the cranium and face.

Blumenbach says, this method may be adopted to measure the degrees of comparison betwixt man and brutes, but certainly not the varieties existing in national character. For, says he, I find the occipital line differing in the skulls of two Turks and in three Ethiopians: and, he continues, the facial line of Camper is ineffectual from a contrary imperfection, since it is the same in skulls totally differing in character.

The *Norma Verticalis of Blumenbach.* Blumenbach was about to enter on a careful observation of the varieties in the national and individual character as discoverable in the skull, and he found, as was to be expected, that neither the systems of Daubenton, Camper, or Durer would answer his purpose. His method is to select two bones, the frontal bone from those of the cranium, and the superior maxillary bone from those of the face, and to compare them with each other. For this purpose he looks vertically on the head, and placing the great convexity of the cranium directly before him, he marks the projections of the maxillary bone beyond the arch of the forehead.

It is obvious that in this manner of comparing the bones of the cranium and face, we cannot see the depth of the bones of the face,

nor of the cranium, and consequently we cannot observe the proportions which the area of the bones of the face has to those of the cranium. It will not suit the objects of the artists, nor lead to the observation of character in the living head.

Professor Cuvier is extravagantly incorrect. He first lays down the common division of the bones of the head into the osseous case for containing the brain, and the bones of the face as constituting the cavities which contain the organs of sight, smell, and taste. He observes that the two organs which occupy the greater part of the face are those of smell and taste, and that according to the degree of development of these organs will the proportion of the face to the cranium be increased. He then enters on a singular enough inquiry. Animals, he says, depend on the relative energy of their functions. Hunger and love govern brutes the most powerfully. Further, he conceives that there is a necessary connexion between the organs of taste and the sense of hunger, between the organs of smell and the sexual propensities. Having thus, as he believes, made it appear that the senses of taste and smell debase and depress the animal in the scale of being, in proportion to their development, he is very easily satisfied that the increase of the size of the bones of the face, as containing these two organs, and the proportionate diminution of the bones of the cranium, as compared with them, will always correspond with the stupidity or ferocity of the animal.

The error which pervades these observations of M. Cuvier, as I conceive, lies in supposing that the perfection of the organ of taste is relative to the magnitude of the jaws, and that the perfection of the organ of smelling has relation to the prominence of the nose. The form of a man's nose has no relation to the extent or perfection of the organ of smelling; the seat of the sense is deep in the œthmoid bone. The nose is peculiar and distinguished in man, because it is a principal part of the organ of voice, and has relation to the transmission of air to the lungs, and to expression. A certain size and form of the nose is as appropriately human as the voice itself; and this leads us to the true explanation of what is great or fine in the human head, and what is debasing.

As I have already hinted, I would refer the peculiarity of the beautiful and impressive form of the antique head to this principle, that the ancient artists sedulously avoided whatever was deemed characteristic of the brute, and magnified those dimensions of the human countenance which mark the distinguishing attributes of man.

The principle of composition among the ancients is worthy of our study. Painting was with them more of a science; with the moderns it is more of an art. The former sought to discover, among those sympathies and associations which often influence our judgment so unconsciously as to appear even like prejudices, some leading principle of composition; they soon left mere imitation,

and advanced to a higher study, that of ideal form, in which they endeavoured to combine excellencies, and to avoid whatever might tend to injure the design or to impair its effect. And in this pursuit they seem to have studied with great care the forms and expression of animals, as contrasted with those of mankind.

We trace this method of study in many pieces of antiquity, where the artist has endeavoured to convey the character of dignity, or bodily strength, or courage, by transfusing into his composition some of the peculiar forms of animals, as in the personification of gods and heroes*.

We may trace it also in ancient masks, and in the heads of satyrs, fawns, and centaurs; and I have placed at the end of this chapter a drawing from an antique mask, which may serve in some degree as an illustration of this. In this composition it was the artist's design to brutify the countenance, and accordingly we see all the proportions and expression, which we are accustomed to admire in the

* Pour peu qu'on examine la configuration du roi des dieux, on découvre dans ses têtes toute la forme du lion, le roi des animaux; non seulement à ses grands yeux ronds, à son front haut et imposant, et a son nez, mais encore à sa chevelure, qui descend du haut de la tête, puis remonte du côté du front et se partage en retombant en arc: ce qui n'est pas le caractère de la chevelure de l'homme, mais celui de la criniere du lion. Quant à Hercule, les proportions de sa tête au cou nous offrent la forme d'un taureau indomptable. Pour indiquer dans ce héros une vigueur et une puissance supérieures aux forces humaines, ou lui a donné la tête et le cou de cet animal; parties tout autrement proportionnées que dans l'homme, qui a la tête plus grosse et le cou plus mince." Œuvres de Winkelmann, p. 367—368.

outline of the antique head, reversed. This peculiarly ludicrous effect is produced by the union of brutal physiognomy with human expression. The flatness, breadth, and depression of the nose, the direct exposure of the nostrils, and the prominence of the eyes, characterise the brute; but in the form of the mouth and the lines of the eyebrows there is wild laughter.

The frequent representation of fawns, satyrs, centaurs, and masks*, necessarily forced the artists of antiquity to study the peculiarities of brutes, and to engraft them on the human form. What then was more natural or obvious, while observing the effect of these forms and expressions transferred to the human countenance, than the persuasion that this character should be carefully avoided, and the proportions which mark it reversed, in order to convey the dignified and characteristic form of man?

* We sometimes see exhibited in paintings of fawns and sylvan boys, by modern artists, such sober, wise, and reflecting human countenances, that they give no representation whatever of those festive deities. At the bottom of the staircase of the Royal Academy, the painter may observe in the configuration of the nostrils of the two centaurs, the moveable membraneous nose of the horse. In these monstrous combinations, while the parts are joined, they must be composed into a whole; and the great merit of the composition lies in reconciling the mind to the representation of these discordant parts.

—————— faber imus et ungues
Exprimet, et molles imitabiturære capillos
Infelix operis summâ, quia ponere totum
Nesciet.

The ancient artists, in representing the sylvan deities, centaurs, fawns, or satyrs, did not merely give them hair and cloven feet, but bestowed on them a certain combination of character, very difficult in execution, but which alone can reconcile us to the palpable absurdity; a coltish wildness in gesture; a goatish expression of countenance or festive hilarity, with features in which there is more of common nature than of dignity, and which are in some conformity with the hair and the hoof; a body and limbs muscular and powerful; a skin browned, and of a high colour, such as the savage wildness of their life may be supposed to produce.

Modern artists hazard their reputation, when they are employed in bestowing the line of beauty on a face or limb, by giving any particular curve or gradation of outline; and they appear to me equally to depart from all the modes and habits of composition of the ancients, and to lose all chance of imitating the antique with success. We see the artists of antiquity combining acknowledged excellencies, but not following a vague and evanescent form of beauty. They seem always to have endeavoured to imitate some acknowledged beautiful form of age or sex. First, to have combined the beautiful forms of individuals of the same sex and age, and then to have combined the beauty and character of different ages: thus, in the Apollo, there is united manly dignity in the proportions and attitude, with youthful beauty in the simplicity of the contour; nay, they even ventured to combine the beauties of both

sexes, for example, in the young Bacchus, or more decidedly in the hermaphrodite. The highest effort of art was to represent man deified, and purified from the grosser character of nature. Of these species of ideal representations are all the sculptures of the deities. Surely the artists in all this were not trusting to their own ideas of beauty, nor considering it as an abstract quality. As in the antique, therefore, each variety had its character established in nature, and resulting from an imitation of particular beauties, it must be impossible to imitate their works, or even to appreciate their high degree of merit, until we are awakened to natural beauty of sex, age, character, and expression. It really appears to me, that those enthusiasts in the antique either mistake the nature and foundation of their sentiments, or have no real feeling of the beauty of form, when they affect to despise natural beauty; for to be susceptible of the beautiful forms of nature is the first step to the admiration of the antique.

Sir Joshua Reynolds has given a very ingenious view of the theory of beauty; that beauty is the medium or centre of the various forms of the individual; that every species of animal has a fixed and determinate form, towards which nature is continually inclining, like various lines terminating in a centre, or like pendulums vibrating in different directions over one central point, and as they all cross the centre, though only one passes through any other point, so it will be found that perfect beauty is oftener produced than any one kind of deformity.

But how shall we reconcile this with the form of the antique? Though this theory may account for the straight line of the ridge of the nose being more beautiful than that which is concave or convex, because it is the central form, it will not explain the peculiarity of the form of the nose, brow, and eye of the antique, which never existed in nature. The minute form of the individual features may be made beautiful upon this principle, but the peculiar form of the whole remains still to be understood; and thus there is suggested a higher object of study, than what is to be found in the mere comparison of individual beauties.

I have endeavoured to place the subject in another view, and to show that the noble and imposing form of the antique resulted from a deep and more extensive survey of nature. I conceive the artists of antiquity to have studied the deformities, as well as the beauties, of the human countenance; and observing the prevailing lines of a low and disagreeable countenance, to have traced this effect to an association with a lower species, and hence to have deduced their principle of ennobling the form of the head, by increasing those peculiarities of character, the indication of intellect, and the powers of expression, which distinguish the human form, and by carefully reversing those proportions which produce a resemblance to the physiognomy of brutes. While we seek to discover the superiority of the antique form in the direction of the lines, the elevation of the facial line, or even in the proportions of the several parts, without examining the cause of our ready aquiescence in that as beautiful,

which yet is not natural, or without tracing the association which affects our judgment, the result of the inquiry must be vague and unsatisfactory, while the principle which influenced the ancients is not established. It is evident, that the line of the antique face cannot be the medium, or central line of the beautiful in nature. And it is scarcely probable, that the line of the nose and forehead of the antique should be the prevailing line in a natural head, or that it should even have resulted from a selection of natural beauties.

No man has bestowed more labour on the measurement of skulls, and their comparison with the antique, than Professor Camper, and in conclusion he says, "If it be now asked what is meant by a fine countenance, we may answer, that in which the facial line makes an angle of 100 degrees with the horizon. The ancient Greeks have consequently chosen this angle." I say rather, that it is that in which the human character is not only preserved but increased, where the superior intellect of man is exhibited in the form, and where the power of expressing human feelings is bestowed in a high degree. It consists not in a line, but in the general proportions, being entirely and appropriately those of man: and this shown not in the head alone, but in the single parts or features; all possessing the appropriate human form and character. There is no satisfactory conclusion in saying, that a head is beautiful, because it is four noses in length; or a face, because the eyes are

in the middle of the head*; or that the figure is elegant, because it is seven or eight heads in height, for the question still remains, why do these proportions produce a beautiful head?

Professor Camper betrays a still more remarkable degree of negligence, in tracing the origin of our ideas of beauty, when he says, we are pleased with a child without acknowledging it to be beautiful; and that the form of a child, abstracted from its playful vivacity, its perfect simplicity, or affectionate attachment, has nothing pleasing in it. It is undoubtedly for these very reasons we hold a child to be the most pleasing, and being the most pleasing, the most beautiful object in the world. The natural form of a child is the only species of beauty so perfect in character and expression, that it cannot be excelled by art, nor receive addition by the adoption of an ideal form; and yet to those who study this matter more deeply there is an additional pleasure in viewing the features of a child, which are formed to admit of a more perfect development, when in the round and smooth form of infancy we can anticipate those changes which shall accord with the course of mental improvement.

* "The head of the Apollo, or Venus, or Laocoon, is universally allowed to be finer or more beautiful than the heads of our best proportioned men and women. Whence does this proceed? Perhaps it is because in antiques the eyes are placed exactly in the centre of the head, which is never the case with us." Again, "The proportions given by the ancients to their figures are not beautiful in our eyes merely from a weak prepossession in favour of all that is handed down to us, but because they have corrected the defects which arise from the laws of vision."—Camper.

If we place before us (as I am in the use of doing in demonstrating the bones of the head) a cast of the head of Mercury from the antique, and of a satyr, said to be by Michel Angelo, the truth of this principle will be manifested.

In the head of Mercury there is a combination of forms which never existed in nature, and a general proportion of the head and face, never to be witnessed in all the varieties of the living head; yet is the whole, and each particular feature, perfectly beautiful. The principle which has been followed in modelling the general form is also visible in the individual features. What you distinguish in looking to the profile is, that the upper part of the face is projected forward, and thus the elevation and fullness of this part, which is peculiar to the human countenance, are increased; but you may perceive the same attention to characterise what is peculiar in the form of the nose, the mouth, the ear, the chin. Take them as parts, or take them as a whole, whatever would lead to the resemblance of the brute is omitted or diminished. But when we look to the satyr the reverse holds; there every feature, as well as the whole form, are half brutish. The forehead is small and depressed, the eyes near, the nose flattened to the upper lip, the mouth protuberant, the ears tipped and sharp, and the expression of the whole is goatish and savage; and the effect would be hideous but for the lively and humorous human expression ingrafted on the physiognomy of a goat or wild colt. In these two specimens of art every proportion is contrasted; in the one there is combined a

noble gravity and stillness, with the finest human features, and in the other an expression certainly of the lowest degree of human passion, with the marked and picturesque features of savage life. You discover in the erected ear, in the corner of the eye, the smack of the lips, forms which degrade the character to that of a half intellectual brute. Exercise your imagination to complete the monster, and you must think you see the hoofs and hairy limbs, the mimicry and antics, the restless activity of a half savage. In the Mercury you might imagine, joined to this face, a form of perfect symmetry, so fashioned that every motion were expressive of grace, suited to rise lightly and float on the wind.

I reject none of the methods of measuring the skull, or studying the peculiarities of the face; but they are only mechanical means of assisting us to work upon a principle which has not hitherto been avowed or expressed.

Mr. Alison, in his work on Taste, where the subject is so happily reasoned, and so eloquently and richly illustrated, that it should have deterred me from venturing on questions of such delicacy, affirms, "that there is no original beauty in any peculiar or distinct forms of the human features." But I must confess that I should be tempted to draw a different conclusion from the examples he brings forward. The form or proportions of the features of Jove are different from those of Hercules, those of Apollo from those of Ganymede, those of the Fawn from those of the Gladiator, and so

in female beauty the forms and proportions are different. True, with differences of age and sex and character, there must be a correspondence of form; but it is nevertheless true, that in every example which he brings forward, there is a certain form or proportion, and to retain that indication of perfection amidst the individuality of character, is what especially distinguishes the works of antiquity. There is therefore a certain permanence of outline or proportion indicative of beauty of countenance common to all, though when the artist models his clay in imitation of the varieties of age, of character, or of emotion, he gives to the original form or proportion an expression corresponding to the individual character. As mankind are distinguished from other creatures by certain peculiarities, the forms which indicate these are the permanent forms, and that outline which goes the nearest to mark what is distinguishing in the species, and which is the most remote from the character of the lower animals, is the original form of human beauty or perfection.

ESSAY VIII.

ESSAY VIII.

SOME FURTHER OBSERVATIONS ON THE PROPORTIONS OF THE SKULL, &c.

It was observed in the preceding essay, that the different methods of measuring the head might all of them assist us in noting the varieties in the form of the head, but that none of them contained a just principle for distinguishing what was by all men acknowledged to be beautiful in the antique. A circumstance to which Professor Gibson of Baltimore, then my pupil, drew my attention, convinced me that the methods which physiologists had practised were very incorrect. He placed before me the skull of a European and of a Negro, and resting them both on the condyles of the occipital bone, it appeared that the European fell forward and the African backward. This struck me as remarkable, when both physiologists and physiognomists were describing the greater comparative size of the face as the grand peculiarity of the African head. I was desirous of investigating this matter further.

To find a line which should not vary, but enable me to measure with correctness in all cases the angles both of the facial line, and of the line intermediate between the cranium and the face, I suspended the skull, poising it upon a perpendicular rod in this manner*:—I first placed a fine rod with an iron point exactly perpendicular; I then set down the skull on this rod, passing the point into the inside of the skull through the foramen magnum, so that the upper part of the cranium rested on the point. On poising the skull so that the rod was exactly betwixt the condyles of the occipital bone, that is, at the point on which the head naturally rests, I procured a line perpendicular to the skull.

I now divided into degrees or equal parts the great convexity of the cranium, from the setting on of the nose on the fore part to the margin of the occipital hole behind; and having so prepared several skulls for adjustment on the rod, I began to make my observations.

In comparing the European skull with that of the Negro, the point of the rod in the latter touched the inside of the cranium several degrees nearer to the bones of the face, or more forward on the cranium, than the former.

* See the adjoining Plate, fig. 7, which is an outline of the Negro skull thus suspended.

On measuring the angle which the facial line of Camper made with this perpendicular line, in a European skull the most perfect in form of any I posssessed, I found the difference to be ten degrees. The facial line of the Negro made with the perpendicular an angle of twenty-six degrees.

The cause of a difference so much greater betwixt the European and African skull, in this way of measuring than in Camper's plates, is, that in this method the facial line has reference to the whole form and proportion of the head; whereas in Camper's measurement it only marks the inclination of the face.

We have now an explanation of the peculiarity in the position of the Negro head; the upward inclination of the face, and the falling back of the head. And here too we have it proved that it is an error to suppose the Negro head to be remarkable in character on account of any increase in the proportion of the bones of the face, to the area of the cranium; for the area of the bones of the face is in this way shown to bear a proportion to the area of the bones in the cranium, less in the Negro than in the European head.

My next object of inquiry was to find on what the distinctive character of the Negro face really depends. For to the eye the Negro face appears larger, while in fact it is proved to be smaller, than the European, considered in relation to the cranium. I took off the lower jaw-bones from both the European and the Negro

skull; and then, in order to poise the skulls on the perpendicular rod, it was necessary to move them *forward* on the point of the rod; but it was necessary to shift the Negro skull considerably *further* forward than the European: the point of the rod thus indicating by its removal backward on the scale that the lower jaw of the Negro bore a greater proportion to the skull than that of the European. The facial line was of course thrown further backwards in both skulls on taking away the jaw; but the jaw of the Negro being larger than that of the European, the inclination backward was greater in the Negro skull. On proceeding to take away the upper jaws, and then the whole bones of the face, I found, by the index on the degrees marked on the surface of the cranium, that the jaw-bones of the Negro bore a much greater proportion to the head and the other bones of the face, than those of the European skull; and that the apparent size of the bones of the Negro face proceeded only from the size and form of the jaw-bones, while the upper bones of the face, and indeed all that had not relation to the teeth and mastication, were less than those of the European skull.

In proceeding with these experiments, I found reason to change my manner of noting the variations. I found that the angle formed betwixt the perpendicular and a line drawn from the occipital hole to the superior margin of the orbit of the eye, served the most distinctly to mark the variations in the inclination of the cranium. Besides, I now wished to measure the cranium itself, and I found

that a scale marked on the great convexity of the skull varied with the form of the cranium. Preserving the principle, I measured the inclination of the cranium by the elevation of the line intermediate betwixt the cranium and face.

On suspending the cranium on the perpendicular rod, having taken away all the bones of the face, I found that the Negro cranium had the base line elevated nearly ten degrees more than the European. I found, on comparing the cranium of a child with that of an adult, that it wanted weight and capacity on the fore-part—that the line was depressed by the increasing size of the forehead as we advanced in maturity.

Upon looking attentively to these skulls, it was evident that there were distinctions to be observed in the form of the cranium itself, independently of the proportions between the face and cranium; that these varieties depended on the form of the brain, and proceeded (I think we may conclude) from the more or less complete development of the organ of the mind. In the infant there is a deficiency of weight, and a less ample area in the higher and anterior part of the brain case. I say less ample, only in reference to what we may estimate as the standard, viz. the adult European. In the Negro, besides the greater weakness and lightness observable in the bones of the whole skull, there is a remarkable deficiency in the length of the head forward, producing a

narrow and depressed forehead; whereas a large capacious forehead is held to be the least equivocal mark of perfection in the head.

By this more accurate method of measuring the skull having been brought to observe distinctions not only in the cranium and bones of the face, but in the face itself, and in the cranium independently of the face, I wished in the next place to consider more at large the varieties in the form of the face, and the reason of the secret influence of certain forms on our judgment of beauty.

From the examination of the heads both of men and brutes, and of the skulls of a variety of animals, I think there is reason to say, that the external character both of man and brutes consists more in the relative proportions of the parts of the face to each other, than has been admitted. On first consideration we are apt to say, that in the beautiful form of the human countenance the likeness of the brute is inadmissible; that wherever we see the resemblance to the brute in the form of the whole countenance, or in the particular features of man, it implies degradation. But this is true to a limited extent only: and how far it extends, the examination of the uses of the parts will inform us.

We have first to inquire which are the nobler features of the face, and what belong to the inferior functions.

In examining the mouth and jaws of animals we shall be immediately convinced that the form of the bones is adapted to the necessities of the animal, independently altogether of the sense of taste. We see that in man, whose jaw-bones are smaller than those of other animals, the sense of taste is most perfect, most exquisite in degree, and suited to the greatest variety in the exercise of the sense. Turning to the skulls of the horse and the lion, we see that the size of the one is fitted for powerful mastication, and that of the other for tearing and lacerating, not for cutting or grinding. But if we examine the form of the teeth more narrowly, we shall see that there must necessarily be a form of the jaw corresponding to the occasions of the animal and its mode of life. In the lion, the tiger, and all carnivorous animals, much of the character of the face lies in the depth of the jaw forward. But this is necessary for the deep socketing of the long CANINE TEETH, whilst the backmost teeth are small. When, on the contrary, the jaw is deep and strong towards the back part, it is for the deep socketing of the GRINDING teeth, and is peculiarly characteristic of the form of the head of the horse, and of all graminivorous animals. There is a form of the cutting teeth (as in the rodentia, and such animals as have to pierce shells for their food, and in monkeys) which, from the angle of their projection forward, bestows a peculiar expression.

Now it certainly is by that unconscious operation of the fancy, that associating power which incessantly produces its influence

on our opinions, that a human face with protuberant jaws is degraded to the brutal character; and that especially the projection of the incisor teeth gives a remarkable character of meanness; while the enlargement of the canine teeth, as in the demons of the Last Judgment of Michael Angelo, produces a peculiar air of savageness and ferocity*.

When we consider what are the muscles appropriated to the motion of the jaw, we see why the enlarged zigoma (the arch of bone on the temple) must project and correspond with the size of the jaws; and why it should be thought a deformity when the arch of the zigoma is remarkably large. It is enlarged to admit the massy temporal muscle by which the jaw is closed, and its form corresponds with the size of the jaw and with the canine teeth. This will be very evident if we place the human skull betwixt the skull of the horse, the lion, the bull, the tiger, the sheep, the dog, &c.

Further, when we compare the bones of the face in several animals, it becomes evident that the comparison of the area of the bones of the head and face will not inform us of the relative perfection of the brain in its exercise. But still in the form of the jaws and bill we may recognise the beast or bird of prey; in the breadth and extent of the central cavities of the face, which are

* Fairy Queen, B. iv. cant. vii. 5.

the seat of the organ of smelling, the tribes which hunt their prey; in the prominent eye placed more laterally, the timidity of the animals which are the objects of the chase; in the large socket and great eyeball, the character of such as prowl by night. Corresponding with these changes in the perfection of the outward senses, there are, no doubt, corresponding changes in the brain, and hence watchfulness, timidity, cunning, thirst of blood; but in the inferior animals the comparison of the relative magnitude of the cranium and bones occupied by the organs of the senses informs us of nothing.

In obtaining a line which shows with precision the bearings of all the parts of the head, I think that I have reduced this subject to greater simplicity; and been able, by the means I have used for measuring the proportions of the skull, to make observations more correct than have been found to result from the methods hitherto in use:—That I have shown that the relative capacity of the cranium or brain-case to that of the face, as containing the organs of the senses, is insufficient to mark the scale of intellect, or to explain the distinctions of character in the human head:—That the growth of the cranium and of its contents with the development of the faculties of the mind, is attended with a change in the shape and capacity of the fore and upper part of the cranium, in comparison with that of its back part and base:—That the perfection of the human head greatly consists in the increase of the cranium forward; in the full and capacious forehead; and that the cranium

of the Negro, when compared with the perfect cranium of a European, has less of capacity on the fore part.

Having found the reason assigned for instituting a comparison between the area of the brain-case and that of the bones of the face quite unsatisfactory; and that in the Negro the whole of the face is actually smaller, instead of being greater, when compared with the brain-case, than that of the European; I was led to compare the bones of the face with each other: and the conclusion to which this led me is, that some principle must be sought for, not yet acknowledged, which shall apply not to the form of the whole head merely, but to the individual parts also. This principle is, I imagine, to be found in the form of the face as bearing relation to the organs; not to the organs of the senses merely, but to those of all the functions performed by the parts contained in or attached to the face—the organs of mastication, the organs of speech, the organs of expression, as well as those which belong to the senses. And here it is to be observed, that there is not necessarily a deformity because the feature resembles that of a brute; but in our secret thoughts the form has reference to the function; and if the function be allied to intellect, if the organ serves an office connected with mind (as the eye in particular does), then it is compatible with the human countenance, though it should bear resemblance to the same organs in a brute; whereas a form which has relation to the strength of the jaws, or to a form of the teeth peculiarly appropriated to the meaner necessities of the animal creation,

is incompatible, and altogether at variance with human physiognomy.

If we take the antique as confessedly the form of beauty in the human head, we shall find that a projecting cheek-bone, or a jaw-bone which is large and square behind, are defects; that the too great depth of the face, which is produced by the length of teeth in the jaws, is also a deformity; that the projecting jaws are still worse; and, above all, that the monkey-like protrusion of the fore teeth takes away the dignity of human expression.

When the principles that sway our secret thoughts are discovered, and when by a comparison of the parts of the head anatomically, a secure foundation is laid for the accurate observation of nature, then the lines of Camper and Blumenbach, as applicable to the living head, will aid us in the examination of character; but of themselves these methods of measurement are imperfect, and being founded on a mistaken principle, they lead, of consequence, to unsatisfactory conclusions.

ESSAY IX.

ESSAY IX.

OF THE NATURAL CHARACTERS AS ILLUSTRATED BY THE FORM OF THE SKULL, AND OF THE CHANGES FROM INFANCY TO AGE.

The bones and the parts which cover them or are contained within them, grow as it were by one impulse, so that there is always a correspondence betwixt them. The fleshy lips of the Negro bear a correspondence with the large and protuberant teeth. The individual among us who has a large square jaw-bone has a thickness

and heaviness of the cheeks and lips. In women, and young persons of both sexes, who have large and regular incisor teeth, there is a pretty fulness and ripeness of the lips. But if, on the contrary, the canine teeth, those strong corner teeth, be unusually large and protuberant, there is not merely a coarseness and heaviness of the lips of a different kind, but a certain irascibility of countenance is produced.

The whole character of the face of a child results from the fleshy parts and integuments being calculated, if I may use such an expression, for the support of larger bones than they possess in early years. The features are provided for the growth and development of the bones of the face, and hence the fulness, roundness, and chubbiness of infancy.

There are some other peculiarities in infancy, for example,

1. The oval elongated head.
2. The flatness of the forehead.
3. The smallness of the bones of the nose.
4. The smallness and shortness of the jaw-bones.
5. The little depth of the jaw.
6. The smallness of the neck compared with the size of the head, which is owing to the peculiar projection of the back part of the head (or Occiput).

Compare the outline of the infant with that of the youth, and the effect of the expanding bones is visible in bestowing the pecu-

liar form of his age. The face is lengthened, and has less roundness; the brow has not, however, increased in proportion with the lower part of the face, though its form has so far changed, that there is now a fulness and prominence towards the ridge of the eyebrows. The cause of this is explained in the view of the section of the skull, fig. 4, plate I. where we observe, that in the forehead there is a cavity: which from the os frontis, or frontal bone, is called the frontal sinus, and the growth of which occasions the protuberance or projection over the eyes, peculiar to manhood. This protuberance is represented in fig. 1 and 2.

Again we observe that in the progress from infancy to youth the upper jaw-bone (the superior maxillary bone) is greatly enlarged; for there is now formed in it also, a great cavity, called the maxillary sinus*. By this enlargement of the upper jaw-bone, which is the centre of the bones of the face, a new character is given to the whole countenance. The bones of the nose are raised; and the nose is lengthened: the cheek-bone (or os malæ) is also made to project.

But further, the growth of the teeth is attended with an increased depth of both the upper and lower jaw-bones; and one necessary effect of this is, to make the angle of the jaw-bone under

* The cavities in the frontal and maxillary bones are connected with the cavity of the nose, and are supposed to have a remarkable effect in giving the sonorous manly tones to the voice. They are very small in women, and in children.

the ear recede more towards the back of the head. To make room for the full set of teeth, the jaws are also elongated. It is by the growth of the teeth, and of those processes of the jaw-bone which are necessary to support and fix them, that the face is deepened, or made longer; and by the lengthening of the jaw, and particularly the receding of the angle of the lower jaw, a manly squareness is given to the chin, instead of the fulness and roundness of the child.

In attending to the forms of the lower jaw-bone, we may observe several peculiarities distinguishing the face in different ages.

The cause of the smallness and roundness of a child's face is apparent, from the little projection of the point of the jaw at the chin, and from the obtuseness of the angle behind. In the adult we observe a greater depth in the body of the jaw-bone, and the teeth being added, the base of the jaws must necessarily be more separated, and of course the face lengthened. We see further, that as the teeth shoot up in succession backwards, the jaw must be lengthened to accommodate them; the chin therefore projects, while the angle of the jaw recedes as in the first outline. Lastly, when the teeth fall out, in old age, the processes (or alveoli as they are called) which grew up with them and supported them, waste away; and there remains nothing but the narrow base of the jaw, while the length of bone from the hinge of the jaw to the angle is undiminished. The effect is perceived in the second outline of the last page, where the teeth of the lower jaw are lost. The jaws are allowed to approach nearer to each other at the fore part; the angle comes of course more forward, and resembles that of the child, were it not that the chin projects; the teeth and adventitious part of the jaws being gone, the chin and nose approach, and the mouth is too small for the tongue, the lips fall in, and the speech is inarticulate.

B B

This sketch will illustrate the effect of the loss of both the upper and lower teeth, and of the processes of the jaw-bones which support them. We have touched on the other peculiarities of old age which the face presents, when treating of the muscles.

The next observation, which the view of these skulls naturally suggests on the subject of character, as it relates to youth or age, is in reference to the distinguishing form of the child's head. We observe that the length of the skull in the child (fig. 3.) is from the forehead to the back of the head. This great length, compared with its depth, no doubt diminishes as the child advances in years; but still the largeness of the head, the projection of the back of the head, and the flatness of the forehead, as in the sketch page 181, must be attended to.

In studying the form of the child's head we are naturally drawn to observe the difference between the natural head and the sculptures of Fiammingo, who has been justly celebrated for his designs of boys. In Fiammingo's works there is an obvious intention of presenting us with an ideal form instead of strictly copying nature. In the works of that artist the eye is too deep set for a boy, and there is a protuberance represented on the lower part of the forehead, which is quite peculiar to a more advanced age. The only character of the boy's head which he has kept true to nature is the largeness of the head compared with the face, the fulness of the cheeks, and the falling in of the mouth and chin. In exaggerating the natural peculiarities the artist has strictly imitated the antique. It may remain a question, how far the principle which is so happy in its effect of heightening the beauty of the adult countenance is necessary or allowable in designing the forms of childhood.

ESSAY X.

ESSAY X.

USES OF ANATOMY TO THE PAINTER—FAULTS INTO WHICH ARTISTS MAY BE BETRAYED IN STUDYING THE ANTIQUE; IN DRAWING FROM THE ACADEMY FIGURE—ANATOMY AS LEADING TO THE CRITERION OF TRUTH OF EXPRESSION AND OF CHARACTER.

In the expression of emotion and passion, whether by gesture or in the countenance, there is sufficient uniformity to make it the subject of art and reasoning; and although we may not obtain at once a perfect rationale of this curious and interesting science, something we hope has been done in discovering the course of that influence by which the mind operates on the body.

It is interesting in a very high degree to mark the traits of emotion, and compare them with the anatomical structure; and amidst the severer studies of anatomy, as connected with health and disease, I have been able, without departing too far from my professional pursuits and duties, to pass many pleasant hours in observing and investigating the anatomy of expression. In the prosecution of anatomy we never know to what our operations

may ultimately tend. The discoveries which I have made in the Nervous System, observations too exclusively medical to appear in this volume, I owe originally to the investigation of my present subject; I saw that the whole frame was subject to influence in union with the expression of the countenance; I was led to the discovery of a particular system of nerves, the offices of which are to control the motions of the muscles in respiration in speech and expression.

The anatomy of the animal frame, as it regards the expression of emotion or passion, is nearly related to philosophy, and is a subject of the utmost difficulty and delicacy. We may hear the question often discussed, of what use is anatomy to the painter? and those of the purest taste will say none at all. It leads the artist to represent monstrous caricatures and the lineaments of death more than life. This is quite true; this is what we see when an artist of no natural talent, and possessed of no true feeling, introduces the representation of bones and muscles instead of the fine forms of health and vigour. But we return to the question, what are the uses of anatomy? As we treat of it here, it is the examination of that apparatus by which the mind expresses emotion, and through which its conditions are modified. We mean to examine the relations and mutual influence of mind and body. As it regards the painter this is an inquiry of great importance. It does not teach him to use his pencil, but to be an observer of nature, to see forms in their minute varieties, which but for the principles here elu-

cidated would pass unnoticed—to catch expressions so evanescent, that without knowing their sources, they would escape him. It is this reducing of things to their principles which elevates his art into a connexion with philosophy, and without which it possesses no character of a liberal art.

By anatomy, considered with a view to the arts of design, I understand not merely the study of the individual and dissected muscles of the face, or body, or limbs; I consider it as including a knowledge of all the peculiarities and characteristic differences which mark and distinguish the countenance, and the general appearance of the body, in situations interesting to the painter or statuary. The characters of infancy, youth, or age; the peculiarities of sickness or of robust health; the contrast of manly and muscular strength with feminine delicacy; the appearances of diseases, of pain, or of death; the general condition of the body in short, as marking to the eye of the beholder interesting situations;—all these form as necessary a part of the anatomy of painting as the tracing of the muscles of expression in their unexerted state, and of the changes induced upon them as emotions arise in the mind.

The anatomy of painting, taken according to this comprehensive description, forms not only a science of great interest, but that from which alone the artist can derive the true spirit of observation, learn to distinguish what is essential to just expression, and be enabled to direct his attention to appearances which might other-

wise escape his notice, but on which much of the effect and force, and much even of the delicacy of his delineations, will be found to depend.

Among the errors into which a young artist is most likely to be seduced, there are two against which the study of anatomy seems well calculated to guard him. The one of these is, the blind and indiscriminate imitation of the antique; the other, an opinion that in the academy figure he will find a sure guide in delineating the natural and true anatomy of the living body. These are subjects on which it may be excusable to insist somewhat at large.

If, as I fear it too often happens, an artist should make the imitation of the antique the beginning and the end of his studies, instead of adopting it as a corrective of his taste, after having laid a sure groundwork in the study of anatomy and a close observation of nature, and after having attained a correct and powerful execution, he will be apt to degenerate into a tame and lifeless style; he will be in danger of renouncing, in pursuit of ideal beauty, the truth of expression and of character.—Nay, I cannot help suspecting that many painters have copied after casts of the antique for years, without perfectly understanding what they should imitate, without even perceiving the necessity of previously studying the nature of the subject, entering fully into the idea of the artist, and being aware of the peculiarities of his mode of composition. Into this fault, one who is learned in the science and anatomy of painting

can never fall. But he who has not compared the natural with the antique head, nor learned the characteristic differences, nor studied the principle on which the ancient artists composed, may be betrayed into the grossest misconceptions by too implicitly following their models. In painting a hero, for example, on whom an ancient would have bestowed strong character, with bold anatomy and powerful expression, he may follow the ideal form of a deity, in which the Grecian artist had studiously divested his model of all that could indicate natural character, or might seem to pertain to humanity. The ancient artist, in following the mythology of his country, and the description of her poets, studied to bestow the character of divinity, by giving repose to the limbs without any indication of muscles or veins, and by exhibiting a face full of the mild serenity of a being superior to the passions of mankind, as shadowing out a state of existence in which the will possesses the most perfect freedom and activity without the exertion of the bodily frame. But those ideal forms are scarcely ever to be transferred to the representation of the human body; and a modern artist who indiscriminately follows such a model, misapplies the noblest lessons of his art.

There are also, independently of the ideal form of divinity, some peculiarities in the nature of the ancient sculpture which ought to be well considered by the student in modern painting.

In the infancy of their art, sculptors did not venture to give to

their figures either animation or character; they did not even open the eyelids, or raise the arm from the side. A stillness and simplicity of composition is thus the characteristic of ancient sculpture; and we are told that Pericles, even in the best age of Grecian art, was anxious that his artists should in all their works preserve this grave simplicity of the early ages, as necessary to grandeur. It is observed accordingly, that among the most striking marks of excellency which distinguish the Grecian artists, the first and most admirable is this noble simplicity; this sedate grandeur of expression; and the prevailing tranquillity of soul which still appears under the most terrible agitations, and the most violent passion. Upon this chaste model was the taste in sculpture formed, in the better ages of Greece and Rome; and its influence has extended to modern times. Unfortunately this style of composing has been perverted into an additional authority for rejecting powerful expression and character even from the canvas. But we must never forget the distinction between statuary and painting. The statuary indeed must often, as well as the painter, represent what is not consistent with perfect beauty; while both must sometimes preserve an indefiniteness, and soften all the harsher, though strictly natural lines of expression. Still however there is an essential and important difference between the principle of composition in painting and in sculpture.

In the statuaries of antiquity, we see a perpetual effort to exalt their productions above the commonness of nature. In the expres-

sion of passion, they studied a grand and general effect, avoiding the representation of that minuteness or sharpness of feature, and of those convulsions and distortions which are strictly natural: and indeed it is scarcely consistent with the character of a statue to represent the transitory emotions of violent passion. The statuary must exercise his genius on the more sublime and permanent emotions, as characterised in the countenance and figure; and much of the difficulty of his art consists in preventing the calmness and repose which ought to be preserved in the attitude and expression, from extinguishing all character, and degenerating into indifference and insensibility.

But this principle does not apply to the painter; and to transfer to painting those rules of composition which flow from the study of ancient sculpture, threatens the loss of all that is peculiarly excellent in the art. As the painter's materials do not admit of a representation too nearly approaching to nature, a character and expression stronger and more natural than is proper to a statue is allowable on the canvas. It is very true, that the painter may often be allowed to preserve much of the same gravity of style with the statuary; that such compositions will possess a certain augustness; and that some subjects require this, while many only admit of it, provided the tone and principle of composition be well preserved, and the painting be characterised by a low and sombre colouring. In general, however, this is neither necessary nor perhaps suitable to the style of composition in painting. A stronger

expression, a closer imitation of natural character may be adopted; and at least it may be laid down, that where there is bold light, and vivid colouring, there should also be strong and natural character, bold and characteristic drawing. A painting, with high finishing and bright colouring, demands minute expression, because the same circumstances which display the natural colouring, are necessarily accompanied by a minute disclosure of the parts, and a sharpness of expression in the features.

Thus the painter must study, as a necessary part of his profession, the traits of human expression. The noblest aim of painting unquestionably is to reach the mind, which can be accomplished only by the representation of sentiment and passion; of the emotions of the mind, as indicated by the figure, and in the countenance. If it be still contended that an imposing stillness and tranquillity must pervade the higher subjects of painting, I will venture to affirm, that it is a tranquillity which he can never attain who is not capable of representing all the violence and agitation of passion. It is not such repose as the artist who has despised or neglected natural character may be able to represent, but such as he alone can conceive and execute, who, having commenced with natural forms and expression, has not contented himself with the first lesson of delineating the effects of passion with boldness, but has studied all the variety of expression, and learned the anatomy of the face and limbs in their most violent action. Nay, tranquillity or repose, in the strict sense of

the words, cannot be characteristically expressed by one who could not with equal facility give energy to the features and figure, and action to the muscles; for in rest there must be character, and in what this consists, can best be observed and understood by him who has studied the effect of action. It ought also to be recollected that repose and agitation must ever greatly depend on contrast and opposition. There are few great subjects in history or mythology, in which the tranquillity and higher beauty of expression in the main figure, whether a hero in the midst of conquest, a heathen deity, or the Saviour, does not borrow some aid from the harsher features, more marked character, and more passionate gesture of the surrounding groups.

Perhaps, I may be thought to have sufficiently pointed out how dangerous it is, for one solicitous to excel as a painter, too closely and indiscriminately to imitate the antique, and especially the productions of ancient sculpture. But it is natural for the student to believe that the study of the academy figure may serve as a guard against all such danger; and afford him a sure criterion for judging of the anatomy of his figures.

Where is the artist to find the principles of his art when the object he desires is, to express the suffering of the mind under all those influences which make the subjects of design in the higher departments of art, and especially in history: is he to grin to himself in a mirror?—then he falls into caricature: is he to study

the expression of the actor ?—then he represents what is fantastic and theatrical. For what is correct representation on the stage is not correct in painting, more than it would be correct for the actor to preserve those traits of expression which unhappily the physician must be familiar with. Talents for observation cultivated into good taste distinguish what is appropriate. The physician in studying symptoms, the actor in personifying suffering, the painter in representing it, or the statuary in embodying it in marble, are observers of nature; but each sees her differently, and with a professional feeling.

The study of the academy figure is, undoubtedly, most essential, but unless followed with some regard to science, it necessarily leads to error.

In the first place, it may be remarked, that the academy figure can give no aid in the study of the countenance. Here the lessons of anatomy, taken along with the descriptions of the great poets, and the study of the works of eminent painters, afford the only resource.

But even for the anatomy of the body and limbs, the academy figure is very far from being an infallible guide. The display of muscular action in the human figure is but momentary, and cannot be retained and fixed for the imitation of the artist. The effect produced upon the surface of the body and limbs by the action of

the muscles, the swelling and receding of the fleshy parts, and that drawing of the sinews or tendons, which accompanies exertion, or change of posture, cannot be observed with sufficient accuracy, unless the artist is able to class the muscles engaged in the operation; and unless he has some other guide than the mere surface presents, which may enable him to recollect the varying form.

When the academy figure first strips himself, there is a symmetry and accordance in all the limbs; but when he is screwed up into a posture, there appears a constraint and want of balance. It cannot be supposed, that when a man has the support of ropes to preserve him in a posture of exertion, the same action of muscles can be displayed as if the limbs were supported by their own energy; and in all academy drawings, we may perceive something wrong where the ropes are not represented along with the figure. In natural action there is a consent and symmetry in every part. When a man clenches his fist in passion, the other arm does not lie in elegant relaxation: When the face is stern and vindictive, there is energy in the whole frame: When a man rises from his seat in impassioned gesture, a certain tension and straining pervade every limb and feature. This universal state of the body it is difficult to excite in those who are accustomed to sit to painters; they watch his eye, and where they see him intent, they exert the muscles. The painter, therefore, cannot trust to the man throwing himself into a natural posture; he must

direct him, and be himself able to catch, as it were intuitively, what is natural and reject what is constrained. Besides, those soldiers and mechanics who are employed as academy figures are often stiff and unwieldy; and hard labour has impaired in them the natural and easy motion of the joints.

Until the artist has gained a perfect knowledge of the muscles, and is able to represent them in action without losing the general tone of the figure, he is apt to produce an appearance like spasm or cramp in the limbs, from one part being in action, while the other is loose or relaxed. For it is always to be remembered, that whether the body be alive or dead, whether the limbs be in action or relaxed in sleep, a uniform character must pervade the composition. Whether the gently undulating line of relaxed muscle be the prevailing outline; or the parts be large and strong, and the muscles prominent, bold, and angular; there must be perfect accordance, otherwise there will be no truth of expression.

I think, that in the sketches, and even in the finished paintings of some artists, I have observed the effect of continuing to draw from the model, or from the naked figure, without due attention to the action of the muscles. I have seen paintings, where the grouping was excellent, and the proportions exact, yet the figures stood in attitudes, when they were meant to be in action; they were fixed as statues, and communicated to the spectator no idea of exertion or of motion. This sometimes proceeds, I have no

doubt, from a long continued contemplation of the antique, but more frequently from drawing after the still and spiritless academy figure. The knowledge of anatomy is necessary to correct this; but chiefly, a familiar acquaintance with the classification of the muscles, and the peculiarities and effect of their action.

The true use of the living figure is this;—after the artist has learnt the structure of the bones and the classification of the muscles, he should attentively observe the play of the muscles when thrown into action and attitudes of violent exertion; but he should particularly mark the action of the muscles during the striking out of the limbs. He will soon, in such a course of observation, learn to distinguish between posture and action, and to avoid that tameness which results from neglecting the play of the muscles. And in this view the painter, after having learnt to draw the figure, as it is usually termed, would do well to make the academy figure go through the exercise of pitching the bar, or throwing or striking. He will then find that it is chiefly when straining in a fixed posture that there is an universal tension and equal prominence of the muscles; and that in unrestrained actions, only a few muscles rise strongly prominent and are distinctly characteristic of that action. He will not, perhaps, be able to catch the character of muscular expression, and commit it to paper at once; but with accurate notions of the classification of the muscles, and of the effect of each action in calling into exertion particular sets of them, knowing to what point his observation should be applied, and correcting his

preconceived notions by the actual appearance of the limb, each succeeding exhibition of strength will accelerate his progress in the knowledge of anatomical expression, and in correctness of design.

The true corrective for the faults we have pointed out is to be found in the study of anatomy. It may well be said, that anatomy is the true basis of the arts of design; and it will infallibly lead to perfection those, who blessed with true genius, can combine correctness and simplicity with the higher graces and charms of the art. It bestows on the painter a minuteness of observation, which he cannot otherwise attain; and I am persuaded, that while it will enable him to give vigour to the whole form, it will also teach him to represent certain niceties of expression, which otherwise are altogether beyond his reach.

Even in drawing from a particular model, the artist who is versed in anatomy, has a great superiority. When I have seen a person unacquainted with anatomy, drawing from the naked figure or from a statue, I have marked the difficulty which he experienced in representing the course of a swelling muscle, or the little depressions and convexities about a joint; and this difficulty I have traced to his total ignorance of the course and action of the muscle, the effect of which he was endeavouring to make out. The same difficulty is often felt in drawing the knobbed end of a bone, or the insertion of a tendon, which being under the integuments of the

limb are but very faintly distinguishable on the surface. These delicate and less definite indications of the anatomy, though easily traced by one acquainted with the structure of the limb, appear to the uninformed, only unmeaning variations in the outline; of the importance of which he has no means of judging; and in imitating them he feels the greatest difficulty, and is exposed to continual mistakes. While the knowledge of anatomy gives to the painter a spirit of minute observation, and leads him to mark those little niceties which add to the beauty of the whole; it also enables him to preserve correctness, and to infuse vigour into his drawing; to catch that diversity which nature sets before him; and to avoid the representation of what is monstrous and deformed.

Suppose that a young artist is about to sketch a figure or a limb, his execution will be feeble, if without knowledge he endeavours merely to copy what is placed before him. In thus transcribing, as it were, a language which he does not understand, he must commit many errors. He sees an undulating surface; the bones and processes of the joints but faintly distinguishable; he neglects the peculiar swelling of the muscles, to which he should give force, as implying motion; he makes swellings merely; he is incapable of representing the elegant undulating outline of beauty with force and accuracy, and of preserving at the same time the characters of motion or exertion. Drawing what he does not understand, he falls into imbecility or deviates into caricature.

But if with a knowledge of anatomy he attempt the same task, his acquaintance with the skeleton enables him with truth and with facility to sketch his first outline of the figure, and correctly to preserve its various proportions; while his knowledge of the muscles enables him to represent forcibly the fleshy parts, simplifying and massing where it is necessary, and at the same time to give an accurate representation of the joint without caricature.

However it is in composing, much more than in copying what is exhibited, that the knowledge of anatomy is truly useful. Without such knowledge, all the original exertions of genius are repressed. Every alteration of posture is accompanied with muscular exertion and change of form, and in proportion to the painter's ignorance of those changes, are all his designs cramped and restrained. Leonardo da Vinci gives formally, as a precept, what is self-evident to an anatomist. "In naked figures, those members must show "their muscles most distinctly and boldly, upon which the greatest "stress is laid; in comparison with which the rest must appear "enervate."—"Remember, further, to make the muscles most "visible on that side of any member which it puts forward to "action." Such rules and precepts are rather the result of anatomical knowledge, than useful as pointing out to one unacquainted with anatomy the effect he is to produce. It is not by following such a precept, that the end is to be accomplished, but by enriching the mind with the continual contemplation of the anatomical

changes, which mark each motion; and by forming, as the result of such study, rules for the representation of action. The uses of this study will best appear from an illustration. In vigorous action, while there is a general tension in the whole frame, there is also, in order to produce the particular motion, a certain class of muscles brought into stronger action than the rest; the delineation of which is the true indication of the action itself. If a man be merely pointing upwards, an elegant simplicity may be all that the painter can attain, or should attempt; but if, in the same posture, he is bringing down a heavy sword to make a blow, the muscles start into strong exertion; and by representing those swelling muscles which pull down the arm and give the sweep to the whole body, the idea of mighty action is conveyed. Thus it is necessary, in order to compose with truth and correctness, not only that the painter should know the place and form of the bones and muscles, but that he should also have an accurate conception of the classing of the muscles in their action*.

* Socrates one day paid a visit to Clito the statuary, and in the course of conversation said to him—"We all know, Clito, that you execute a variety of figures; some in the attitude of the race, and others in the several exercises of wrestling, of pugilism, and of the pancratium; but with regard to the quality which particularly captivates the soul of the spectator, I mean their correct resemblance of the life, how is this property wrought into your productions?" As Clito hesitated for a reply, Socrates quickly rejoins, "Is it not by endeavouring to imitate the configuration of the bodies of those who are actually engaged in those exertions of skill and activity that you succeed?" "Without doubt," said the artist. "Well, then," resumed the philosopher, "you study under the various gestures and attitudes of the living body, what parts are drawn up, out of their natural situation, or carried in a contrary

Perhaps I shall best impress my idea of the advantage to be derived from this study, by contrasting two young artists employed in drawing from a figure; the one trusting to his untutored genius, the other assisted by the study of anatomy. The first, after much labour, is seen copying bit by bit, and measuring from point to point; and the effect is an accurate outline. The other catches the attitude with facility, because a knowledge of the skeleton has enabled him to balance the trunk upon the limbs, and to give the outline with boldness; the turn of the limbs, the masses of muscular flesh, and the general character of the joints, are touched with a slight but accurate hand. If you look upon his sketch, you will find the attitude, the character, the spirit and life of the original. Even in the early stage of his drawing, and whilst his opponent is copying parts, he presents you with the foundation of an accurate and spirited sketch; and if the anatomical student has the advantage in conveying the general idea in a few lines, he has a much greater superiority in drawing the minute parts.

direction below it. Some which undergo compression, others an unnatural elevation; some which are thrown into a state of extension, others which become relaxed; all this you imitate, and hence you produce that fidelity, that accuracy, which we admire." The artist acquiesced in the remark. "And the expression of the passions, again,—how great a pleasure does this produce to the spectator?" "Surely," replied Clito. "Thus those who are in the actual conflict of the battle, are they not to be represented as bearing menaces in their eyes? while satisfaction and joy should sit upon the countenances of the victorious?" "Unquestionably." "It is then equally the business of the statuary to transfuse into his productions the workings and emotions of the mind."—Xenophon. *Memorabilia.* Lib. iii. cap. x. p. 6.

But this superiority which anatomy bestows, is still better exemplified, if the model be removed from these two young painters, and they draw the figure from recollection; or if, keeping the model before them in its original posture, they are to alter the attitude of the figure. Suppose, for example, that we take the fighting gladiator. Instead of a young warrior pushing on with great energy, let their task be to represent him receiving a blow of his antagonist, which forces down his shield upon his breast, or brings him with his knee to the ground; as it is beautifully represented on some medals. Can we doubt for a moment which will excel? The one will copy from recollection his original drawing, or twist with great difficulty the erect limbs of the statue into a couching posture, while the other will gain by his greater freedom. Retaining the general air, like one who had understood what he copied, he is aware that a new class of muscles come into action, while those formerly in exertion are relaxed; he knows that the bending of the limbs increases their measurements; he knows how to represent the joints in their new postures; in short, he gives energy and effect as a compensation for slighter errors.

It is a mistake to suppose, that because in many capital pictures the anatomy is indicated very faintly, the study of it may not be necessary to a painter. Even that, which in the finished picture is to be the mere indication of muscular exertion, ought to have its foundation laid in the sketch, by a correct and strong representation of the full action. It is very true, that the sketch is too often

a mere indication of the painter's design, intended to be worked up to all the truth of representation as he transfers it to the canvas; that the outlines of the figures are oftener mere shadowy forms, undefined in the minute parts, than studies of anatomical expression, or guides to the painter in his subsequent labour. And perhaps it is for this reason that there have been many painters, whose sketches all admire, but whose finished paintings fall short of public expectation. Yet I venture to say that a sketch which is tame and spiritless, and in which the anatomy has not been studied, is a bad foundation for a fine painting. Even a little exaggeration of the anatomy is not only agreeable, but highly useful in the mere sketch. The anatomy should be strongly marked in the original design; and from the dead colouring to the finishing, its harshness and ruggedness should be gradually softened into the modesty of nature. The character of a sketch is spirit and life; the finished painting must have smoothness and accuracy combined. That which was a harsh outline in the sketch, or the strong marking of a swelling muscle, or the crossing of a vein, will in the finished composition be faintly indicated, perhaps only by a tinge of colour. But the anatomy of the finished picture will always be the most happy, and even its delicacy, perhaps the greatest, where the painter has a strong and clear conception of the course and swelling of each muscle and vein, which enters into the delineation of the action.

While artists neglect the study of anatomy, as connected with

character and expression in painting, they never can attain the "vantage ground of their profession." Perhaps, also, it is to be feared, that while this study is confined to a few, and one or two artists only are versed in the science, they will be apt to caricature nature. They are learned above their rivals: it is their *forte*, and they are solicitous to display it. But were anatomy more generally studied, the same spirit and love of originality, would make those very men seek for distinction, by combining elegance and the other requisites of fine painting, with truth and expression; and prevent them from being any longer ambitious of drawing in a style bordering on deformity.

It is not enough however, to prove, that the painter should accomplish himself in the knowledge of anatomy. The public attention must also be directed to its importance. For as necessity must precede invention in the origin of arts, so must general good taste precede or accompany their improvement. The mere conviction in the mind of the painter, that anatomy is necessary to the perfection of his science, will seldom be sufficient to insure his application to a very difficult and somewhat of a disgusting study. The knowledge and opinion of the public must force him to the task, and encourage his labour by the assurance of its merited reward.

EXPLANATION

OF

PLATE V.

OF THE ETCHINGS OF THE SKULLS.

Before entering on the consideration of the forms of the head, the reader may direct his attention to Plate V. I shall shortly point out the most remarkable bones and processes as they regard our present inquiry.

Fig. 1. The Skull of a Man fully grown, presented in a front view.

A. The Frontal Bone (os frontis).

B. The Protuberances formed by the Frontal Sinuses, (see the section of these cavities in fig. 4).

C. The Temporal Ridge of the Frontal Bone; on which the form of the temple depends.

D. The CHEEK BONE (or os malæ).

E. E. The UPPER MAXILLARY BONES.

F. The NASAL BONES.

G. G. The ORBITS OR SOCKETS FOR THE EYE BALLS. The circle of their margin is seen to be formed of the frontal bones, the cheek bones, and the superior maxillary bones.

H. H. The TEMPORAL BONES. These hollows are filled with a strong fleshy muscle, which arising upon the side of the skull, passes down through the arch to be inserted into the lower jaw-bone.

I. I. The MASTOID OR MAMILLARY PROCESSES OF THE TEMPORAL BONE. These are the points, into which the strong mastoid muscles which give form to the neck, are inserted.

K. The LOWER JAW.

L. The ANGLE OF THE LOWER JAW.

M. The PROCESSES OF THE JAWS which form the sockets for receiving the roots of the teeth.

Fig. 2. Is the Skull of an Adult seen in Profile, in which we have to remark these parts:

A. The FRONTAL BONE.

B. The TEMPORAL BONE.

C. The ZYGOMATIC PROCESS OF THE TEMPORAL BONE, which, with the process of the cheek bone, forms an arch, under which the tendon of the temporal muscle passes, to be inserted into the lower jaw.

Plate

London: Published by John Murray, Jan. 1824.

D. The HOLE, OR FORAMEN OF THE EAR; a little below this, is the mastoid process of the temporal bone.

E. The PARIETAL BONE, so called, because it forms the greater part, as it were, the wall of the skull.

F. The OCCIPITAL BONE.

These bones are united by sutures, in which the processes of the bone as they grow, seem to run out, and indent themselves into the opposite bone, without there being an absolute union betwixt them. That which unites the frontal bone, and parietal bones, is called the coronal suture; that which we see here uniting the parietal bone, and temporal bone, is called the squamous or temporal suture. The line which is betwixt the occipital and parietal bones, is the lambdoidal suture; lastly, the union of the parietal bones is called the sagittal suture, because it is laid betwixt the lambdoid and coronal sutures, like the arrow betwixt the bow and the string.

There are many lesser sutures which unite the smaller bones of the face, but they need not be mentioned here.

G. The CHEEK BONE (os malæ).

H. The UPPER JAW BONE (or os maxillare).

I. The BONES OF THE NOSE (ossa nasi).

K. The LOWER JAW (inferior maxilla).

L. The ANGLE OF THE JAW.

M. The PROCESS OF THE JAW which moves in the socket in the Temporal Bone.

N. The CORONOID PROCESS OF THE JAW into which the temporal muscle is fixed, to move the jaw in conjunction with other muscles.

Fig. 3. Represents the Skull of a Child at Birth, in which the sutures are not yet formed, the bones of the cranium being loose, and attached by their membranes only. While spaces may be observed, left unprotected from the imperfect ossification of the bones.

The individual parts require no references; they will be sufficiently understood from their correspondence with fig. 2.

Fig. 4. Is a Section of the Cranium, in which the only thing meant to be particularly remarked, is the cavity which is to be observed in the frontal bone, viz. The frontal sinuses.

EXPLANATION

OF

PLATE VI.

THESE outlines are in explanation of the VII. and VIII. Essays p. 149, and p. 167.

Figs. 1 and 2. Are Marginal Illustrations of Albert Durer. A pretty decisive proof that he understood the theory of the facial line.

Figs. 3 and 4. Are from Camper, intended by him to illustrate the effects of inclining the fascial line forward in approximating the form of the head to the antique, but which I have copied here, to prove the very reverse. For while the individual features bear the character of vulgar or common nature, they are not improved by giving them the general proportions of the antique head.

Fig. 5. Is an Outline of the Head of Mercury, to show that the same theory which led the artists of antiquity to give a peculiar form to the head and face, directed them also in the individual features. See p. 158 and p. 161.

Fig. 6. Is an Outline of the Negro Head, to show that the flesh of the cheeks and lips correspond with the large teeth and jaws, fig. 7.

Fig. 7. Is the Skull of a Negro suspended on a rod, to show the inclination of the fascial line, in explanation of the text, p. 168.

THE END.

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Plate VI.

Fig. 1.

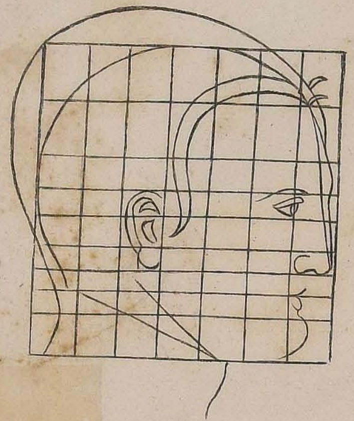


Fig. 2.

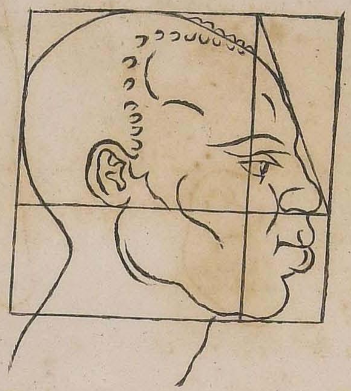


Fig. 3.

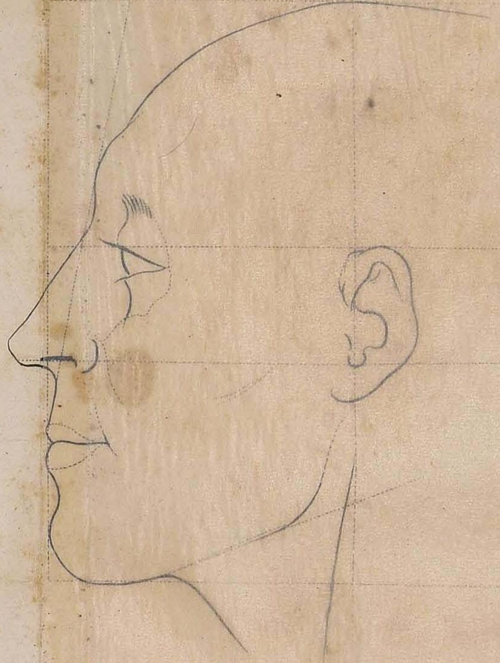
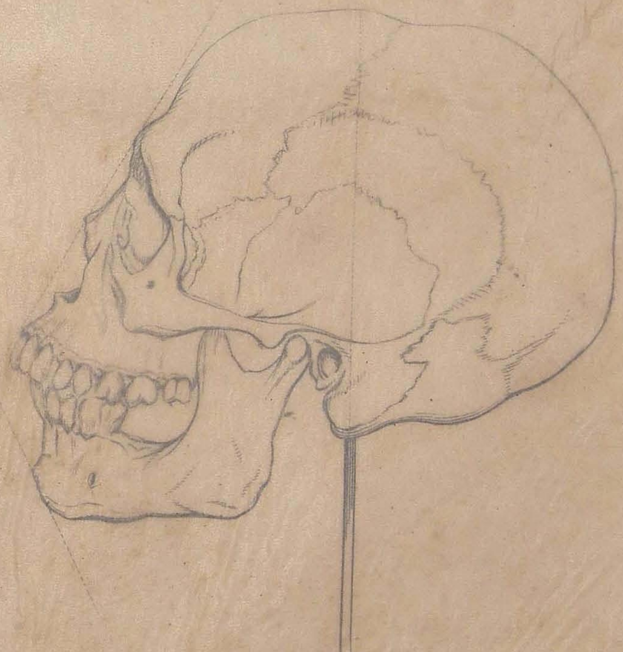


Fig. 4.

Fig. 5.

Fig. 6.

Fig. 7.



Drawn by Chas. Bell.

London, Published by John [illegible]

Engraved by Thos. Landseer.